

JAPAN



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J A P A N :

TRAVELS AND RESEARCHES.



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JAPANESE TYPES.

J A P A N :

TRAVELS AND RESEARCHES

Undertaken at the Cost of the Prussian Government.

BY
J. J. REIN,

PROFESSOR OF GEOGRAPHY IN MARBURG.

TRANSLATED FROM THE GERMAN.

WITH TWENTY ILLUSTRATIONS AND TWO MAPS.

SECOND EDITION.

London :
HODDER AND STOUGHTON,
27, PATERNOSTER ROW.

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SPECIAL NOTICE—REIN'S JAPAN, VOL. II.

The Translation of the Second Volume, treating of Agriculture, Forestry, Commerce, Manufactures, and the Decorative Arts, and amply illustrated, including specimens of native work, is far advanced, and will be issued at an early date.

LONDON: HODDER AND STOUGHTON, 27, PATERNOSTER ROW.

P R E F A C E.

THOUGH it is right that every book should above all things speak for itself, still the custom of giving it a letter of introduction, in the form of a preface, on its road to publicity, is one which has its full justification. Recognising this, and leaving the question of its necessity untouched, I would state in the first place that the present work is based upon a residence of nearly two years in Japan, and extensive journeys through the islands of Hondo, Shikoku, Kiushiu, and Amakusa, in the years 1874 and 1875. These were undertaken, in conformity with the commission of the Prussian Ministry of Commerce, for the purpose of studying and giving an account both of the trade of Japan and the special branches of industry there carried to so high a degree of perfection. The substance of this account will appear in another volume, under the title of "The Industry and Trade of Japan."

But as there can be no doubt that the nature of a country, the historical and social development of its inhabitants, and their relations to other nations, are the basis upon which the form and substance of its commercial and industrial, as well as its intellectual, life are unfolded, it seemed advisable first to publish the present work.

It was a difficult step for the author to take, to leave his family and his post as Head-teacher of Physical Science at the Model School and Director of the Senckenberg Scientific Society at Frankfort on the Main—a post demanding his whole time and strength—and to go to Eastern Asia, but he was encouraged by the confidence placed in him by the Prussian Government, and the hope that God would give His blessing to his sincere endeavour to act up to it. To judge how far this task has been accomplished must be left to the reader. My part is to take this opportunity of publicly expressing to my superiors in the Prussian Ministry for Trade and Commerce and for Instruction and Education my

profound thanks for the great confidence and favour they have manifested and maintained towards me to the present hour. My warmest acknowledgments are also due to the former representatives of the German Empire in Japan, to Herr von Brandt, Minister at Peking, and Baron von Holleben, Minister at Buenos Ayres, for the hospitality with which they received me at the German Legation at Tôkio, and for all the assistance they gave me in the prosecution of my task. I feel also under obligation in many respects to the German consuls, Herr Zappe at Yokohama, Herr Bair at Tôkio, and Herr Leysner at Niigata, and also to the Japanese Government for the protection they afforded me, and to many governors for their great readiness to promote my undertaking as far as lay in their power.

Each single chapter of the present volume, and especially of the first section, is—with the exception of the historical portion, for which all accessible sources have been investigated and made use of—the result of my own observations and of researches based upon them. I will here dwell no further upon the consequent difference between this work and all former publications on Japan, nor call attention to the great difficulties which the execution of so comprehensive a task necessarily involved, but only assure the reader that thorough lucidity and truth have been the ends for which I have striven. In doubtful cases I had the kindly offered counsel of friends and colleagues, viz. of Messrs. Dunker, von Fritsch, Geyler, Greeff, Hilgendorf, Fd. Justi, Kobelt, Tadashi Sanda, and Satow, to whom I would here express my sincere thanks. Professor Justi assisted me on many occasions, not merely by his large acquaintance with languages, but also by executing from various photographs the pen and ink drawings on which the illustrations of the types of Japanese and Ainos are founded.

The English translation is based on a careful revision of the original, and may be considered a new and improved edition of it, all the proofs having passed through my hands.

J. J. REIN.

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THE PHYSIOGRAPHY OF JAPAN:

A PHYSICAL GEOGRAPHY OF THE COUNTRY.

INTRODUCTORY.

A. SITUATION, SIZE, AND DIVISIONS OF JAPAN.

THE Empire of Japan, the Nihón, Nippón, or Dai Nippón of its inhabitants, is the most easterly country of Asia, and stretches from $24^{\circ}4'$ N. lat. (Hateruma in the Riukiu group) to 51° N. (Shumshu Island, the most northerly of the Kuriles) and from $123^{\circ}48'$ E. long. (Yonakuni of the Riukiu group) to $156^{\circ}36'$ E. (Shumshu). The country accordingly extends over nearly 27 degrees of latitude, and more than $33\frac{1}{2}$ of longitude. In the extended ring of active and extinct volcanoes which surrounds the Pacific Ocean, it forms, with its four great islands and a considerable number of smaller ones, a long chain of more than 2,000 miles, reaching from the Island of Formosa as far as Cape Lopatka, on which the waves of a dangerous sea often break in wild surge, and which violent earthquakes not unfrequently shake in alarming fashion.

Japan falls naturally into four groups; viz.,—

1. Japan Proper, consisting of the three large islands Hondo (Honshiu or Jicata, mainland), Kiushiu (Nine-lands), and Shikoku (Fourlands), with a number of smaller islets alongside them. The fourth large island of the kingdom, Yezo, although politically it occupies a different position, must be included with them. The smaller islands of this group are: Sado and Oki in the Sea of Japan; Tsushima and Ikishima in the Channel of Corea; Hirado and the Gotô (Five islands) as well as Amakusa and the Koshiki group on the west side of Kiushiu; Tanegashima and Yakunoshima south of it; Awaji in the Inland Sea and the Shichitô (Seven islands) on the south-east of the Peninsula Idzu, viz., Ôshima (Vries Island), Rishima, Nijima, Shikinejima, Kantsujima, Miyakeshima and Mikurajima, besides further south, Hachijoshima and Koshima.

The "Inland Sea" of English maps, or Seto-no-uchi-umi (*i.e.* the sea between the straits) or Seto-uchi of the Japanese, separates with the Van der Capellen Straits, the Linschoten Straits, and Bungo Channel, the three large southern islands from each other, while the Tsugaru Straits separate Yezo from the main island or Hondo. But the entire group is separated by Broughton Channel,

the Sea of Japan and La Perouse Straits from Corea and Asiatic Russia, by Colnet Straits from the next group.

2. The Riukiu Islands (Liukiu according to Chinese pronunciation), also called Loochoo, between the 30th and 24th parallel—Colnet Straits and Formosa.

3. Chijima (Thousand isles) or the Kuriles, between the 43rd and 51st degrees N. lat.—from Yezo to Kamtschatka.

4. Ogasawara-shima or Munintô (Muninjima), commonly called the Bonin¹ Islands, in the Pacific, between 27° and 28° N. lat., and under 142° E. long., some 140 miles south-east of the Peninsula of Idzu.

It appears from the annexed conspectus that the older country, Japan Proper, embraces three-fourths of the entire area, that Honshiu is almost three times as large as Yezo, more than six times as large as Kiushiu, and twelve times as large as Shikoku. The area of the latter island is just one-half that of Kiushiu or Chinsei, as it is also called in Japanese books. If we compare the islands of Japan in point of magnitude with countries nearer home, we find that together they are equal to the British Islands, Holland, and Belgium; Honshiu alone is as large as Hungary, Yezo is but a little larger than Bavaria, Kiushiu is equivalent to Baden and Wurtemberg including Hohenzollern, Shikoku to the province of Schleswig-Holstein.

Europe received the first intimation of the existence of Japan towards the end of the thirteenth century, through Marco Polo, who had been told in China fabulous stories of the great wealth of gold in the eastward-lying island-kingdom of Zipangu. By this word he rendered the Chinese designation Dschi-pen-Kuë² or Dschi-pon, which the Japanese have transformed into Nippon or Nihon and have generally adopted as the designation of their country in place of the older native names. The word Nippon (Nihon) is derived from *nitsu*, Sun, and *hon*, rising, origin, and was applied by the Chinese in the same sense in which Levant, Orient, and Morning-Land were familiar to Europeans or Dagoe to the Swedes.³

Nippon is called by the Romance peoples Japón, by the Teutonic peoples Japán, names which were introduced by the Portuguese or Dutch respectively, but which are not used by the Japanese (Nippon-jin, *i.e.* Nippon people), and must be considered corruptions of the word Dschi-pen. The term Nippon, moreover, is always applied by the natives to the whole kingdom, and never, as by the Europeans, to the chief island alone, for which oddly enough they have no special name, since the expressions Honshiu or

¹ Bonin is undoubtedly a corruption of the Japanese "Munin," without men, so called because Ogasawara, their discoverer, found them uninhabited.

² Von Richthofen writes: Ji-pönn-kwo.

³ The Japanese flag carries a red sun on a white ground.

CONSPECTUS OF THE AREA AND POPULATION OF THE JAPANESE EMPIRE.¹

| Names of Islands. | Square Ri. | Sq. Km. | Area in English Sq. miles. | Percentage of Total Area. | Population (Census 1874). |
|--|------------|------------|----------------------------|---------------------------|---------------------------|
| Hondo (Nippon) . | 14,494'49 | 223,555'41 | 86,294'40 | 58'9 | 25,478,834 |
| Kiushiu | 2,311'85 | 35,656'83 | 13,763'73 | 9'4 | 4,986,613 |
| Shikoku | 1,151'24 | 17,756'14 | 6,854'02 | 4'7 | 2,484,538 |
| Sado | 56'33 | 868'84 | 335'37 | } 0'7 | 362,177 |
| Tsushima. . . . | 43'95 | 677'86 | 261'66 | | |
| Awaji | 36'55 | 563'79 | 217'60 | | |
| Oki | 21'88 | 337'52 | 130'03 | | |
| Iki | 8'55 | 131'91 | 50'91 | } 1'2 | — |
| Smaller Islands neighbouring on the preceding ² . | 307'00 | 4,734'97 | 1,827'76 | | |
| A. OLD JAPAN ³ (Ôyashima) | 18,431'84 | 284,283'27 | 109,735'48 | 74'9 | 33,312,162 |
| Yezo and small islands near . . | 5,084'84 | 78,426'00 | 30,273'10 | 20'6 | } 144,069 |
| Chijima (Kuriles) . | 961'24 | 14,825'70 | 5,722'84 | 3'9 | |
| Riukiu (Loochoo) . | 135'72 | 2,092'40 | 808'02 | 0'6 | 167,073 |
| Ogasawara-shima . (Bonin Islands) | 5'43 | 83'70 | 32'33 | — | 69 |
| B. NEW JAPAN | 6,187'23 | 95,427'80 | 36,836'29 | 25'1 | 311,211 |
| A. Old Japan . . | 18,431'84 | 284,283'27 | 109,735'48 | 74'9 | 33,312,162 |
| B. New Japan . . | 6,187'23 | 95,427'80 | 36,836'29 | 25'1 | 311,211 |
| C. JAPAN. EMPIRE | 24,619'07 | 379,711'07 | 146,571'77 | 100'0 | 33,623,373 |

¹ Most of the data used in preparing this table were taken from Behm and Wagner, "Die Bevölkerung der Erde," v. They have relied upon the figures of the Japanese Survey and of the census of 1874.

² The area of these smaller islands about Hondo, Kiushiu, and Shikoku, in which they are for administrative purposes always included, is here certainly put too high, since the important islands are Amakusa, the Koshiki Isl., Tanegashima, Yakunoshima, Gotô, Hirado, the islands in the Inland Sea, and Shichitô, which taken together are rather inferior to the five middle islands (Sado, Tsushima, Awaji, Oki, Iki). Their population is included with that of Hondo, Kiushiu, and Shikoku.

³ We distinguish Old and New Japan, inasmuch as the former, Ôyashima, was conquered and colonised by the Japanese in early times, while New Japan consists of acquisitions of the last few centuries or of very recent times, which have so far occupied a different political position, and are to be regarded as colonies of the mother country, with the exception of Riukiu.

Jikata, mainland, Hondo, main part, which in recent times have frequently been employed by the Japanese, are not used by the common folk, and are only very gradually becoming naturalized.

In one of the earliest German books about Japan, by Johann Meyer, which appeared at Dillingen in 1587, entitled "*Neue, wahrhafte ausführliche Beschreibung der jüngst abgesandten japanischen Legationen*," a translation from the Italian, the country is called Japón or Japónien.

The Japanese in their earlier separation, like so many other peoples, regarded their country as the centre and most important part of the world, though indeed of a limited world. For in their conception it was bounded on the east by Tai-yô or Taihei-Kai, the Great Sea or Pacific Ocean; on the north by Makatsu, by which is meant Karafto (Saghalien)¹; on the west by Kara or Shina (China); on the south by Tenjiku (Heaven's support) or India, upon which Portugal, Holland, and other countries of which they had heard were supposed immediately to border. The word "Dai," great, was prefixed to the name Nippon, and this designation was employed even in official documents. Thus, *e.g.* even the treaty concluded with Corea in 1876 begins with the words: "Friendship has existed from of old between Dai Chozen and Dai Nippon." In proportion as the Japanese have of late years enlarged their geographical views by means of maps and education in the schools as well as by travelling, they have considerably moderated their estimate of the greatness of their own country, and the use of the "Dai" before "Nippon" has disappeared from later publications.

According to ancient tradition the ruler of Japan, the Mikado, descends in a direct line from the sun-goddess Amaterasu, whose parents were the divine Isanagi and Isanami. As they appeared one day upon the bridge of heaven resting upon the clouds, in order to watch the sea raging in the depths beneath, Isanagi let the end of his richly ornamented lance fall into it, upon which it straightway parted. The drops falling from the lance became islands, and the first to arise out of the waves was Awaji, upon which the divine pair settled as Adam and Eve. Seven other islands arose from the same creative act, and bore henceforth, together with Awaji, the name Ôyashima, *i.e.* the great eight islands. They are those already enumerated: Hondo, Kiushiu, Shikoku, Sado, Tsushima, Awaji, Oki and Iki. These and the surrounding smaller islands formed Old Japan, a territory of 109,735 English square miles, not much greater therefore than Prussia before 1866. Besides the name Ôyashima, later Nippon, the Japanese had also many an epitheton ornans for their country. Thus they called it, *e.g.* Kami-no-kuni, Shin-koku, Country of the gods, or Divine country.

¹ The name Makatsu occurs on the memorial Tagajô-no-hi, east of Sendai. See my notice of it in the seventh Heft of the *Deutsche Ostasiatische Gesellschaft*.

Yamato-no-kuni, land behind the mountains ;¹ Onogoro-shima, islands of the petrified drops ; Shiki-shima, extended islands ; etc.

Ôyashima or Old Japan is washed by the Sea of Japan and the Pacific between $128\frac{1}{2}^{\circ}$ and 142° E. long., and is separated towards the south, under 30° N. lat., by Colnet Straits from Riukiu, and towards the north, under $41\frac{1}{2}^{\circ}$, by the Tsugaru Straits from Yezo. Its southernmost part therefore lies in the latitude of the Nile delta, its northernmost in that of the Bosphorus. The first division of Ôyashima into provinces took place in the time of the 10th Mikado (Sûjin Tennô 97-30 B.C.), but was reformed and improved by the 13th Mikado (Seimu Tennô 131-190 A.D.). His rule thus extended over thirty-two provinces—northwards about as far as a line from Sendai to Niigata, for the northernmost portion was at that time still in the hands of aborigines, the Emishi (also called Ebisu and Yezo), who were related to the Ainos in Yezo. The celebrated Empress Jingô Kôgô (201-269 A.D.), who as widow of the 14th Mikado had a glorious reign between the 14th and 15th Mikados, after her victorious return from Shiraki (Corea) divided the provinces of her kingdom on the pattern of Corea into the Kinai or Gokinai,² *i.e.* the five home provinces or imperial domains, because the residences of nearly all the Mikados³ down to the present have been in them, also called Kamigata, and into the Shichi-dô or Seven Circuits.

In the reign of the forty-second Mikado, Mommu Tennô (696-707 A.D.), several of the provinces were still further divided, and the number of all those in the eight districts thus grew to sixty-six, to which the islands of Tsushima and Iki have to be added as detached provinces. The forty-fifth Mikado, Shômu Tennô (723-755), next had the boundaries of the several provinces more precisely determined. Finally, in 1868, after the deposition of the Shiogunat by the present Mikado, the two northernmost and largest provinces, Mutsu and Dewa, were further divided, the former into five, the latter into two provinces, so that the entire number in the territory of Ôyashima increased to seventy-three. At the same time Yezo was also divided into ten provinces, to which the Chijima (Kuriles) must be added as an eleventh, and they were added to the others under the name Hokkaidô or North Sea road as a ninth circuit. The Riukiu meantime constituted until lately a separate principate or Han.

In the following conspectus the nine circuits are enumerated with

¹ In composition, Yamato-, Wa-, or Honcho are frequently used to signify Japan; as in "WA-kan san zai dzu. ye;" "*Honcho*-guashi;" "Yamato-jimbutsu gua-ye," etc. etc.

² The Gokinai was at first a Shikinaï (iour domain lands), until later Idzumi was divided into Kawachi and Idzumi.

³ The first Mikado was Jimmu Tennô, 660-585 B.C. (1-76 of the Japanese era); the 121st, or by another reckoning the 123rd, is Mutsu Hito-Tennô, who began to reign in 1867.

their eighty-two provinces, with the addition moreover of Tsushima and Iki, making altogether therefore eighty-four provinces, most of them under two names—one Japanese and the other Chinese. Where one of these is more usual than the other, it is printed in open type; where both are equally employed, both are printed in open type.

The Chinese names of provinces were introduced as a result of Corean influence at the same time as the circuits, and have reference to the older division of the country. When, therefore, some of the larger original provinces were later still further broken up, as *e.g.* Hi-no-kuni (Fire-land) into Hizen and Higo, the hither and further Hi; Bi, into Bizen, Bitchiu and Bingo, *i.e.* the hither, middle and further Bi; or as Mutsu (Ôshiu) into as many as five provinces, they continued to bear the Chinese collective name, and this it is that explains why in all these cases the Japanese name of the province, as the more distinct, was more usual. But for Hokkaidô (Yezo), which was only divided into provinces in 1868, there is no other ordinary Chinese designation.

CONSPECTUS OF THE 9 CIRCUITS AND 84 PROVINCES OF JAPAN.

A. ÔYASHIMA, OLD JAPAN.

I. *Go-kinai*, or the 5 Home Provinces :

| Japanese Name. | Chinese Name. | Number of Kori ¹ or Districts. | Chief Town. |
|----------------|---------------|--|----------------|
| 1. Yamashiro | Jôshiu | 8 | Kiôto. |
| 2. Yamato | Washiu | 15 | Nara. |
| 3. Kawachi | Kashiu | 16 | Yaogo, Sayama. |
| 4. Idzumi | Senshiu | 4 | Sakai. |
| 5. Setsu | Sesshiu | 12 | Ôsaka. |

II. *Tôkaidô* (literally *Eastern Sea Road*), with 15 Provinces :

| | | | |
|------------|---------|----|--------------|
| 6. Iga | Ishiu | 4 | Uyeno. |
| 7. Ise | Seishiu | 13 | Tsu, Kuwana. |
| 8. Shima | Shishiu | 2 | Toba. |
| 9. Owari | Bishiu | 8 | Nagoya. |
| 10. Mikawa | Sanshiu | 8 | Okazaki. |
| 11. Tôtômi | Enshiu | 12 | Hamamatsu. |
| 12. Suruga | Sunshiu | 7 | Shidzuoka. |
| 13. Kai | Kôshiu | 4 | Kofu. |
| 14. Idzu | Dzushiu | 4 | Nirayama. |
| 15. Sagami | Sôshiu | 4 | Odawara. |

¹ Although the Japanese Kuni, as regards their small extent, answer rather to the English counties, or better still to the French Departments, and the Kori rather to circuits (Arrondissements), yet for various reasons I have preferred the more familiar terms Provinces and Districts.

| Japanese Name. | Chinese Name. | Number of Kori or Districts. | Chief Town. |
|----------------|---------------|---------------------------------|---------------|
| 16. Musashi | Bushiu | 22 | Tôkio (Yedo). |
| 17. Awa | Bôshiu | 4 | Katsuyama. |
| 18. Kadzusa | Sôshiu | 9 | Kururi. |
| 19. Shimôsa | Sôshiu | 12 | Koga, Chiba. |
| 20. Hitachi | Jôshiu | 11 | Mito. |

III. *Tôsançô, i.e. Eastern Mountain Road, with 13 (formerly 8) Provinces :*

| | | | |
|----------------|----------------|----|---|
| 21. Ômi | Gôshiu | 12 | Ôtsu. |
| 22. Mino | Nôshiu | 12 | Gifu. |
| 23. Hida | Hishiu | 3 | Takayama. |
| 24. Shinâno | Sinshiu | 2 | Matsumoto, Na- gano. |
| 25. Kôdzuke | Jôshiu | 14 | Takasaki. |
| 26. Shimotzuke | Yashiu | 9 | Utsunomiya. |
| 27. Iwaki | Mutsu Ôshiu | 14 | Taira, Shirakawa. |
| 28. Iwashiro | | 9 | Fukushima, Wa- kamatsu. |
| 29. Rikuzen | | 14 | Sendai. |
| 30. Rikuchiu | Dewa Ushiu | 10 | Morioka. |
| 31. Mutsu | | 4 | Hirosaki. |
| 32. Uzen | | 4 | Tsurugaôka, Ya- magata, Yone- zawa. |
| 33. Ugo | | 3 | Akita. |

IV. *Hokurokudô, i.e. North-land Road, with 7 Provinces :*

| | | | |
|---------------|----------|---|-----------|
| 34. Wakasa | Jakushiu | 3 | Ohama. |
| 35. Echizen | Esshiu | 8 | Fukui. |
| 36. Kaga | Kashiu | 4 | Kanazawa. |
| 37. Noto | Nôshiu | 4 | Nanao. |
| 38. Echiu | Esshiu | 4 | Toyama. |
| 39. Echigo | Esshiu | 7 | Niigata. |
| 40. Sado Isl. | Sasshiu | 3 | Aikawa. |

V. *Sanindô or Mountain-shade Road, with 8 Provinces :*

| | | | |
|------------|----------|----|------------------------|
| 41. Tamba | Tanshiu | 6 | Kameyama. |
| 42. Tango | Tanshiu | 5 | Miyadzu. |
| 43. Tajima | Tanshiu | 8 | Idzushi, Toyoo- ka. |
| 44. Inaba | Inshiu | 8 | Tottori. |
| 45. Hôki | Hakushiu | 6 | Yonago. |
| 46. Idzumo | Unshiu | 10 | Matsuye. |

| Japanese Name. | Chinese Name. | Number of Kori or Districts. | Chief Town. |
|----------------|---------------|---------------------------------|-------------------------|
| 47. Iwami | Sekishiu | 7 | Tsuwano. |
| 48. Oki Isl. | | 4 | Yabi. (Yamashi- ma). |

VI. *Sanyôdô, i.e. Mountain Sun-side Road, with 8 Provinces :*

| | | | |
|--------------|----------|----|------------|
| 49. Harima | Banshiu | 16 | Himeji. |
| 50. Mimasaka | Sakushiu | 12 | Tsuyama. |
| 51. Bizen | Bishiu | 8 | Okayama. |
| 52. Bitchiu | Bishiu | 11 | Matsuyama. |
| 53. Bingo | Bishiu | 14 | Fukuyama. |
| 54. Aki | Geishiu | 8 | Hiroshima. |
| 55. Suwô | Bôshiu | 6 | Yamaguchi. |
| 56. Nagato | Chôshiu | 6 | Hagi. |

VII. *Nankaidô, i.e. South Sea Road, with 6 Provinces :*

| | | | |
|----------------|---------|----|------------|
| 57. Kii | Kishiu | 17 | Wakayama. |
| 58. Awaji Isl. | Tanshiu | 2 | Sumoto. |
| 59. Awa | Ashiu | 10 | Tokushima. |
| 60. Sanuki | Sanshiu | 11 | Takamatsu. |
| 61. Iyo | Yoshiu | 14 | Matsuyama. |
| 62. Tosa | Toshiu | 7 | Kochi. |

VIII. *Saikaidô, i.e. West Sea Road, with 9 Provinces :*

| | | | |
|-------------------|-----------|----|-------------|
| 63. Chikuzen | Chikushiu | 15 | Fukuoka. |
| 64. Chikugo | Chikushiu | 10 | Kurume. |
| 65. Buzen | Hôshiu | 8 | Kokura. |
| 66. Bungo | Hôshiu | 8 | Funai. |
| 67. Hizen | Hishiu | 11 | Nagasaki. |
| 68. Higo | Hishiu | 15 | Kumamoto. |
| 69. Hiuga | Nishiu | 5 | Miyasaki. |
| 70. Ôsumi | Gôshiu | 8 | Kajiki. |
| 71. Satsuma | Sasshiu | 13 | Kagoshima. |
| 72. Iki Isl. | Ishiu | 2 | Katsumoto. |
| 73. Tsushima Isl. | Taishiu | 2 | Idzunohara. |

B. LATER ACQUISITIONS WITH SPECIAL ADMINISTRATIONS

IX. *Hokkaidô, or North Sea Road, with 11 Provinces :*

| Japanese Name. | | Number of Kori or Districts. | Chief Town. |
|----------------|-----------|---------------------------------|----------------------|
| 74. Oshima | Isl. Yezo | 7 | Hakodate, Matsumaye. |
| 75. Shiribeshi | | 17 | Otaru. |
| 76. Iburi | | 8 | Mororan. |
| 77. Ishikari | | 9 | Sapporo. |

| Japanese Name. | | Number of Kori or Districts. | Chief Town. |
|------------------------|-------------|---------------------------------|--------------------|
| 78. Hitaka | } Isl. Yezo | 7 | Saru. |
| 79. Tokachi | | 7 | Hira (Birô). |
| 80. Teshiwo | | 6 | Ruru-moppe. |
| 81. Kushiro | | 7 | Akeshi. |
| 82. Nemuro | | 5 | Nemuro. |
| 83. Kitami | | 3 | Sôya. |
| 84. Chishima (Kuriles) | | 5 | Tomari in Kunashir |

84 Kunis (Provinces) with a total of 717 Koris (Districts).

To these may be added :

- a) The Riukiu-Islands as a separate principate or Han (now Ken).
- b) Ogasawara-shima, also called Munintô (Bonin Isl.) as a new colony.

In earlier times a barrier, which ran from Ôsaka to the border of Yamato and Ômi, separated the thirty-three western from the thirty-three eastern provinces. The former were collectively entitled Kuwansei (pronounce Kânsé), *i.e.* westward of the Gate; the latter Kuwantô (pronounce Kântô), *i.e.* eastward of the Gate. Later, however, when under the Tokugawa regime the passes leading to the plain in which Yedo, the new capital of Shôguné, grew up were carefully guarded, by the Gate (Kuan) was understood the great guard on the Hakone Pass, and by Kuwantô or Kuwantô-Hashiu the eight provinces eastward of it: Sagami, Musashi, Kôtsuke, Shimotsuke, Hitachi, Shimôsa, Katsusa, and Awa. The provinces of Sanyôdô and Sanindô are still usually denoted as Chiugoku or Central-lands.

When after the abolition of the Feudal System in 1872 a new administration was introduced, the territory of Oyashima was divided, for the most part without regard to the old provinces, into three Fu (Miyako or capitals) and into seventy-two Ken or departments, though in the course of the following years, especially 1876, the boundaries of the latter were essentially altered and their number finally reduced to thirty-five. Hokkaidô (Yezo and the Kuriles) however forms a colony under a special administration, called Kaitakushi. This has recently become the case with Ogasawara-shima (Munintô), the Bonin Islands, while Riukiu as Han (Clan) was under a prince (king) of its own until in the course of the most recent events [see for details in the Second Part] the feudal relation was abolished, the prince like the Daimios was mediatised, and the group of islands incorporated with the mainland as a thirty-sixth Ken. The new departments (Ken) are named after their chief town or after the districts in which they are situated :

CONSPECTUS OF FU AND KEN AND THEIR CHIEF TOWNS.

| Fu and Ken. | Chief Town. | Old Province in which chief town lies. |
|----------------------------------|-------------|---|
| 1. Tôkio-fu | Tôkio. | Musashi. |
| 2. Kiôto- | Kiôto. | Yamashiro. |
| 3. Ôsaka- | Ôsaka. | Setsu. |
| 1. Kanagawa-ken | Yokohama. | Musashi. |
| 2. Hiogo- | Hiogo. | Setsu. |
| 3. Nagasaki- | Nagasaki. | Hizen. |
| 4. Niigata- | Niigata. | Echigo. |
| 5. Saitama- | Urawa. | Musashi. |
| 6. Chiba- | Chiba. | Shimosa. |
| 7. Ibaraki- | Mito. | Hitachi. |
| 8. Gumma- | Takasaki. | Kôtsuke. |
| 9. Tochigi- | Tochigi. | Shimotsuke. |
| 10. Sakai- | Sakai. | Idzumi. |
| 11. Miye- | Tsu. | Ise. |
| 12. Aichi- | Nagoya. | Owari. |
| 13. Shidzuoka- | Shidzuoka. | Suruga. |
| 14. Yamanashi- | Kofu. | Kai. |
| 15. Shiga- | Ôtsu. | Ômi. |
| 16. Gifu- | Gifu. | Mino. |
| 17. Nagano- | Nagano. | Shinano. |
| 18. Miagi- | Sendai. | Rikuzen. |
| 19. Fukushima- | Fukushima. | Iwashiro. |
| 20. Iwate- | Morioka. | Rikuchiu. |
| 21. Awomori- | Awomori. | Mutsu. |
| 22. Yamagata- | Yamagata. | Uzen. |
| 23. Akita- | Akita. | Ugo. |
| 24. Ishikawa- | Kanazawa. | Kaga. |
| 25. Shimane- | Matsuye. | Idzumo. |
| 26. Okayama- | Okayama. | Bizen. |
| 27. Hiroshima- | Hiroshima. | Aki. |
| 28. Yamaguchi- | Yamaguchi. | Suwo. |
| 29. Wakayama- | Wakayama. | Kii. |
| 30. Yehime- | Matsuyama. | Iyo. |
| 31. Kochi- | Kochi. | Tosa. |
| 32. Fukuoka- | Fukuoka. | Chikuzen. |
| 33. Oita- | Funai. | Bungo. |
| 34. Kumamoto- | Kumamoto. | Higo. |
| 35. Kagoshima- | Kagoshima. | Satsuma. |
| 36. Okinawa-ken (Riukiu Isl.) | Shiuri. | Okinawa-shima. |

It will appear from what has been said that since the restoration of the Mikado's rule the old provinces have ceased to have any political bearing. But they still remain of importance for the understanding of the history and civilization of Japan as well as in other respects, as their division for the most part follows natural boundaries, while the new division into administrative districts (Fu and Ken), because of its arbitrariness and frequent changes, is to the geographer of very subordinate value and interest.

B. EXPLANATION OF COMMON GEOGRAPHICAL TERMS.

(Where there are two words together, the first is the original Japanese, the second the Sino-Japanese ¹ term.)

1. *Indications of place.*

Higashi, tô=east; nishi, sai=west; minami, nan=south; kita, hoku=north; kami=upper; shimo=lower; naka=between.

Sen (zen)=before, hither; chiu=middle; go=after, further, as affixes, *e.g.* in names of districts, as Bizen, Bitchiu, Bigo.

2. *Qualities.*

Shiro (shira)=white; kuro=black; aka=red; aō (awo)=green; ô (oki), tai (dai)=great; ko=small; takai=high; hikui=low.

3. *Measures.*

10 mo=1 rin; 10 rin=1 bu; 10 bu=1 sun; 10 sun=1 shaku; 10 shaku=1 jô; 6 shaku=1 ken; 60 ken=1 chô; 36 chô=1 ri.

1 sun, shaku, ken=1 inch, foot, fathom, respectively.

The geographical unit of length is the ri (derived from the Chinese li, but much longer).

1 ri=3927·27 metres, or 2·44 English miles. There are therefore 28·28 ri to 15 geographical miles, or one degree.

1 tsubo=36 square shaku; 300 tsubo=1 tan; 10 tan=1 cho; 120 cho=119 hectares, accordingly 1 cho is nearly 1 hectare. 1 ho-ri or 1 ri-shi-ho=1 square ri.

4. *The land and its parts.*

Kuni, koku (goku) or shiu=land, province (tai-shiu, continent); ken=department; kori (gori)=district; shima (jima), tô=island; han-tô=peninsula (not common); yama, san=mountain; nobori=mountain (in the Ainô language); san-miaku=mountains (not common), [yama, combined with plant and animal names, means

¹ An explanation of this expression will be found in the chapter on the language in the Second Part.

wild, coming from the mountain forests]; mine=peak, ridge; take (dake)=lofty peak, lofty mountain; saki or misaki=promontory; tôge=pass; sakai=boundary; tani (dani)=valley; hira, chi=plain; taira (daira)=plain (only common in a few cases, as Aidzutaira, Iwakitaira); hayashi or ki=forest; mori=grove; hara, no, or no-hara=meadow, moor, an open uncultivated plain; ta=ricefield; inaka=country as opposed to town; jôka=castle town, formerly the residence of a prince; miyako (not common), fu=capital; machi¹=town, mura=village; shiro=castle; tera (dera)²=Buddha-temple; miya=Shintô-temple, or Kami-hall.

5. *Parts of the sea.*

Ô-nada, tai-yô or tai-kai=Pacific Ocean; umi, kai=sea; uchi-umi or naka-umi=inland sea; iri-umi, ura or wan=bay; nada=part of the sea, also used for ura (wan), bay and seto or kai-kio=strait; minato, tsu=harbour; hama=flat coast; shiwo=current, tide, *e.g.* kuro-shiwo=Japanese gulf stream; hiki-shiwo=flood; michi-shiwo=ebb.

6. *Terms employed for fresh waters or Kaka.*

Kawa (gawa)=river; minamoto, suigen=spring; kuchi (guchi)=mouth; taki (daki)=waterfall; yama-midzu=mountain stream; taiga=big stream, though this designation is less common than the prefix ô, great, in opposition to ko, small, before kawa, thus ôgawa, the great river, ko-gawa, the little river, stream; hori=canal; hori-wari, canalized river. For lake, the terms midzu-umi (fresh-water sea), kosui and ko are used, although in north-western Japan, especially in Echigo, several lakes have the name kata (gata), liman (Germ. Haff); and in the plain of Kuwantô, the affix ura, bay; ike is a pond, numa a marsh. A warm spring is called onsen or ide-yu and yu (as prefix or affix to the proper name), warm bath; yu signifies warm water generally as opposed to midzu, cold water. Jigoku (hell) is a Solfatare, usually with the prefix ô, or ko, according to its size.

The Japanese have a very troublesome and confusing practice of repeatedly changing the name of a river in its course. If, *e.g.* it is called, at the beginning, after the mountain or district from which it takes its rise, then below the first important place it passes it is often called after this; only at the second or third place, etc., to undergo further changes. Thus the river which runs its whole course through the midst of the province Musashi is at first called Arakawa; but from the first station, Todamura on the Nakasendô,

¹ Machi also means a collection of houses, which may form a street, hence a city may comprise many "machi."

² Ji in composition is commonly used to signify temple, as Ho-riu-ji, To-fuku-ji, etc.

onwards, Todagawa; until, only two ri further down, the village of Sumida gives occasion to a new designation. The Sumidagawa flows through the western part of the capital Tôkio, and here takes below the main bridge (Riôgoku-bashi) the name Ôgawa, under which it finally finds its way into the Bay of Yedo.

In the case of mountains we are met by another difficulty. This is the frequent repetition of the same name. Thus we find the word Komagatake (Foal-mountain) more than twenty times. The Japanese, indeed, then adds the name of the province or district by way of explanation, and speaks, *e.g.* of a Shinano-no-komagatake, Kôshiu-no-komagatake, Yezo-no-komagatake. But when the mountain lies on the frontier of two provinces, we may hesitate to which we shall assign it, and still more when three provinces meet together. In such a case the mountain or pass is repeatedly called Mikuni-yama (Three-lands mountain) and Mikuni-tôge (Three-lands pass).

II.

COAST LINE, PARTS OF THE SEA, CURRENTS.

THE Japanese islands have a considerable coast development, and possess, especially upon the south and south-west sides, many sheltered bays, which however in many cases are too shallow to allow access to large ships. Flat, sandy beaches are frequently interchanged with precipitous coasts, although the latter predominate. The most enclosed piece of sea is the "Inland Sea" of English maps, called in Japanese *Seto-uchi* or *Seto-uchi-no-umi*, *i.e.* the sea within the straits. It extends between the islands Hondo, Kiushiu and Shikoku, participates in the tidal changes of the ocean, and so far does not differ from most parts of it. The very narrow channel of Shimonoseki (*Shimonoseki-no-seto*), the Van der Capellen Straits of Europeans, along which Shimonoseki and Mojisaki are as near together as Rüdesheim and Bingen on the Rhine, separates Hondo from Kiushiu, and connects *Seto-uchi* with the Japanese Sea. The Bungo-nada (*Bungo Strait*) between Kiushiu and Shikoku, and the Linschoten Strait between Shikoku and Honshiu form the connection between the Inland Sea and the Pacific.

The passage from Kiushiu to Shikoku is usually performed from *Saga-no-seki* to *Yawata-hama*. Here the two islands approach each other by two tongues of land, of which that of Shikoku in particular is very long and narrow, extending to 5 *ri* (12.2 English miles). The sea-bottom rises rapidly from the Pacific towards the *Seto-uchi* in the Bungo-nada as well as in Linschoten Strait, from a depth of 50 to 60 fathoms to a half or even a third of this, and when in these narrow channels a sharp east wind combines with the considerable movement of the tidal waves from the Kuroshio, a wildly surging, dangerous sea is produced, which is especially feared in the Bungo-nada.

Linschoten Strait has, between the provinces of Kiushiu and Awa a mean width of eighteen English miles, but is then divided by the island of Awaji, and narrowed into the *Idzumi-nada*, which leads into the Bay of Ōsaka, and into the *Naruto Passage* between Awaji and Awa.¹ Here is the *Awa-no-naruto*, or whirlpool of Awa, a sort of *Charybdis*, where, according to a

¹ The Akashi Strait separates Awaji from Harima.

Japanese description, "the waters of the sea eddy round, and the dashing on the rocks causes a roar as of a thousand thunders." The diameter of this whirlpool is more than a ri (two nautical miles). When ships are carried into it, they are gradually set whirling round, are drawn down, and are turned round and round, without its being known what becomes of them." So runs the story; in reality the danger is not so serious. Not far away is the much weaker Ko-naruto, or small whirlpool.

The Inland Sea of Japan is sown with numerous, for the most part volcanic, islets, and is altogether so shallow that an elevation of the bottom by only twenty fathoms would in many places produce dry passages between the neighbouring larger islands. Many of these islands are covered with pines, and a sail amongst them reminds us in some degree of a trip through the Skärs of Scandinavia or Finland. The following parts of the Inland Sea are distinguished and named after the neighbouring provinces:—the Suwo-nada, Iyo-nada, Bingo-nada (or Midzushima-nada), Harima-nada and Idzumi-nada with Kobe-no-minato and Ôsaka-no-minato, the harbours of Kobe and Ôsaka.¹

Near Kiushiu the greatest part of the east coast is flat and open, and accordingly without harbours. On the south side the Kagoshima-ura runs far in towards the north between the peninsulas of Ôsumi and Satsuma, is surrounded by a magnificent coast, and is specially distinguished by the volcanic island Sakurajima, which rises precipitously within it and adds a great charm to the scenery. The peninsulas just mentioned run out into steep promontories on which the sea-waves break, as well as on Satano-misaki, the southernmost point of Ôsumi and Kiushiu generally.

On the west side of Kiushiu the sea runs northwards between the much-broken Hizen and Higo which lies eastward from it as far as Saga in the latitude of Bungo-nada. Into this bay runs out from Hizen towards the south-east the peninsula of Shimabara with the volcano of Onzengatake. Here also lie at the entrance several larger noteworthy islands, especially Amakusa, then to the east of it Kami-shima, and to the south Naga-shima. The northernmost portion of the bay is called Shimabara-nada (properly Ariake-no-oki), and has flat eastern, and steep volcanic western, shores. Shimabara-nada is connected with Chijiwa-nada by Hagasaki-nada between Amakusa and the peninsula of Shimabara, and the latter bay extends between the south of Hizen, the peninsula of Shimabara and the island Amakusa.

The whole of Hizen is properly a peninsula stretching to the

¹ The Idzumi-nada and especially the Bay of Ôsaka bears also the old name Naniwa-no-tsu, *i.e.* Bay of Naniwa or the swift waves. The neighbouring Setsu is also called Naniwa-no-Kuni, land of the swift waves. This name Naniwa refers to the rough, difficult passage of Jimmû Tennô through the Seto-uchi, when he came from Hiuga and landed near Ôsaka, and accordingly this town also is called Naniwa.

south-west with Nomo-saki as a southernmost projection, having for the most part rocky coasts, into which besides Chijiwa-nada several bays run deeply from the west. Chief amongst them is the beautiful Bay of Nagasaki with its well-known and excellent harbour; then come Ômura Bay (Ômura-no-iri-umi) and the bays of Imari, Karatsu and Fukuoka. Towards the north, where Kiushiu runs out furthest in Hi-saki on the Shimonoseki strait, the inland sea forms the bays of Nakatsu and Funai.

The island of Shikoku is most broken up on the Bungo-nada. Of the little tongues of land here formed by the sea, the northernmost stretches out furthest like a long breakwater against the inland sea and ends in Cape Mi-saki only five ri (12 English miles) from Kiushiu. Southwards the island ends in the two promontories of Isa-saki and Muroto-saki. Between the two lies Toshiu-nada or Tosa-no-umi, a broad bay with partly flat, partly steep coasts, near which the camphor tree forms an important constituent of the evergreen forests. Opposite to it, on the north side of the island, between Kajitori-saki and Hakura-saki, the Bingo-nada runs in towards the south so that here Shikoku is narrowest.

The south side of the island of Honshiu from Shimonoseki to Noshima-saki on the south coast of Awa is, as compared with the other parts, very rich in bays and possesses several excellent harbours, the chief of which is Yokohama, then Yokosuka, Shimoda, as well as Kobe on the Inland Sea. Most of the larger bays, however, are shallow and their innermost shores flat; on the other hand, the peninsulas between them rise with steep shores towards the south. To these peninsulas belong Kadsusa-Awa, eastwards of Yedo Bay, which ends in the promontories Noshima-saki and Su-saki; further, the peninsula Sagami with many small bays and the forelands Kuwanon-saki, Tsuruga-saki and Mi-saki; the peninsula Idzu which ends in the Irô-saki; two small peninsulas on the coasts of Tôtômi and Mikawa, the more easterly of which ends with Omayc-saki, the western with Irako-saki; the peninsula of Owari with the Moro-saki. Between Ise-no-umi and the easternmost parts of the Inland Sea the provinces of Ise, Shima, Iga, Yamato, Kii, Kawachi and Idzumi also form together a mountainous peninsula very rich in natural beauties, which has a flat shallow coast only on the side of Idzumi, but otherwise is distinguished by the deep water in its many small bays. We will call it the peninsula of Yamato.

As noteworthy portions of sea between the peninsulas previously mentioned may be named: Tôkio-wan between Kadsusa-Awa and Sagami with the bays of Yokohama and Yokosuka on the west side; Sagami-nada between Sagami and Idzu; Suruga-wan (Suruga-nada) between Idzu and Omayc-saki; Hama-no-minato, shallow bay on the coast of Tôtômi; Mikawa-no-iriye between the promontories Irako-saki and Moro-saki; Ise-no-umi, also called Owari-wan, between Owari and Ise.

The open sea between Toba at the entrance of the Sea of Ise and the peninsula Idzu is called Tôtômi-nada and, like the Bungo-nada, has the reputation of being often very rough.

From the steep eastern coast of the peninsula Kadzusa-Awa northwards begins an open, monotonous flat coast, which extends with slight interruptions of its character to the other side of the mouth of the Kitakami on the Sendai-wan. On its western side this Sendai Bay forms a shallow lagoon, in which is situated the island group Matsu-shima. This consists of many small islets which, lying close to one another, with an average height of 20-30 metres, are for the most part covered with pines (whence the name), and are considered by the Japanese a special attraction of the north of Japan.

From the mouth of the Kitakami, or round about the small peninsula which forms the north-east limit of Sendai Bay, and the projecting island of Kinkuasan, 300 feet high, the eastern coast of Honshiu assumes a different character. This is determined by the numerous spurs that run out eastwards into the sea from the chain of mountains which, to the east of the Kitakami-gawa, runs parallel to the coast, and here rises up steeply if not very high. These mountain-spurs form the watersheds of as many small coast streams, whose valleys end in beautiful bays. On the dark cliffs of old schist and different crystalline rocks which shut in these little bays from without, the ocean-waves are broken, so that many a sheltered anchorage can be found here, although there are only a few cases, as *e.g.* at Kamaishi, because of the quantities of magnetic iron ore there, in which they have any great importance, as the land here offers little else to stimulate an active sea-trade.

On the north side of Honshiu, in the Tsugaru Strait, looking towards the island of Yezo, there opens the Awomori-wan, with one of the deepest and safest havens. The inner coast of Awomori is predominantly flat, while the two peninsulas limiting the bay run out towards the north in the steep Shiriya-saki, Oma-saki, Ishi-saki and Tatsupi-saki.

The Japanese Sea washes the west coast of Honshiu along its whole length. Only on the borders of a few provinces, as well as where mighty volcanoes, such as Iwakisan and Chôkaisan, have sent their masses of lava and ashes down to the sea, and again quite in the south of Sanindo, the coast is steep; elsewhere for long reaches, as at Toyama, Niigata and Akita, it is flat, covered with flint-slate shingle or bright red sand and very little broken. The consequence is that during one half of the year, while rough north winds prevail and the lofty waves of the Japanese Sea beat upon these shores, navigation must for most of the coast towns entirely cease. This is the case in particular of Niigata, which therefore is of slight importance as a treaty port, since it can only carry on direct outward trade in summer.

Of the few inlets of the sea and projections of the land on this

coast we may here mention from north to south: the Jiûsa-gata on the coast of Mutzu, and the larger Hachiro-gata on that of Akita. This lagoon-like bay stretches twelve miles long from north to south and has at its south end, north-west from the town of Akita, a narrow exit into the sea. By this bay the peninsula of Iwasaki is formed. From here, the 40th parallel to the 37th of latitude and 137° E. longitude, the coast is very monotonous, and there the peninsula of Noto runs out far towards the north and ends in Cape Roiyen. Between this peninsula and the coast of Echiu is the Toyama-wan or Fuse-no-umi, and on the east side of Noto itself is the Nanao-wan with Noto-jima (Noto Island). Farther on there follows again a monotonous beach and then the beautiful Wakasa-wan, while its easternmost portion, the bay of Tsuruga with its excellent harbour, is especially deserving of note. Between this and the mouth of the Kisogawa in the Gulf of Owari the breadth of the island has considerably decreased and only extends to 26 ri, or 63 English miles. This line forms the basis of an isosceles triangle, the apex of which lies in Ôsaka and which includes the basin of the Biwa-ko as well as the valley of the Yodogawa.

The last of the larger bays on the coast of the Japanese Sea belongs to the province of Idzumo. There, in lat. $35\frac{1}{2}^{\circ}$ the districts of Aika and Shimane form a far-stretching peninsula running from west to east, ending in the Jizô-saki, while from the south-west the land is continued in the peninsula Yonago as far as Sakai, where a narrow arm of the sea runs in between the two peninsulas and widens in to the Naka-no-umi (Inland Sea) in which lies Daikon-jima (Radish Island). This bay is about 16 miles long, nearly 9 miles broad, and throughout about 3 metres deep. Westwards, past the town of Matsuye, the water way is continued by a river, and broadens out after some four miles into the shallow freshwater lake of Shindji-no-midzu-umi, which is 16 miles long and 5 miles broad and receives several streams, of which the Hii-gawa is the most important.

Let us now turn in conclusion to a short survey of the coast of Yezo. Opposite the bay and harbour of Awomori lies the Bay of Hakodate with the harbour of the same name, the best in Yezo. Following the same direction further northwards, we come first to the Volcano Bay, and then crossing the land in a somewhat north-westerly direction to the mouth of the Ishikari and Strogonoff Bay or the Otarunai-wan on the Tartar Sea. It is Volcano Bay and Strogonoff Bay that give to south-west Yezo the form of a peninsula. Towards the north and south as well as towards the east Yezo also assumes more or less the form of a peninsula. The names of the most noteworthy promontories are: Shirakami opposite Cape Tatsupi in Mutsu on the west side of Tsugaru Straits, through which runs a dreaded current, called Nakano-shiwo, which is constantly directed from the Japanese

Sea to the Pacific, and Shirokubi-saki and Yesan-saki on the east side ; further Yerimo-saki as southern point of Hidaka, Nosscho-misaki on the south east, and Shire-toko-saki on the north-east coast of Nemuro ; finally Entomo-saki on the north.

On all these promontories projecting mountain spurs form coasts steeply jutting to the sea, while between them on the inner margins of the bays, and especially at the mouths of the large rivers, stretch flat shores with many sand-dunes.

The sea plays a very important part in that combination of the meteorological phenomena of a place or country which we call climate. It must be regarded as the great reservoir from which the atmospheric water chiefly rises to form clouds and rain, but into which all the downfall is again finally collected. But with the water there is also collected a great part of the heat which the land had received by insolation, and it is stored up for colder seasons and climates and carried to them by currents and winds. An exact knowledge of the comparative relief of the sea, of its horizontal distribution, of its comparative temperature and movements, must essentially contribute to the understanding of the climatic phenomena of an island-kingdom like Japan, and at the same time also contribute to the understanding of the peculiarities so abundantly offered in the Fauna and Flora as well as finally in the character and habits of its inhabitants.

After a brief account of the distribution of the sea on the coasts of Japan therefore, there may here naturally follow a notice of its most remarkable movements. Of the tides as yet little can be said. We are still without investigations of the tides in most of the more important places, or at least accessible reports of them, without which it is impossible to draw general conclusions as to their movement. The height of flood changes indeed intelligibly enough with the season, and varies according to the latitude and conformation of the coast, but in general it is not very considerable, and keeps within 3 and 7 feet.

Amongst the permanent currents in the Japanese waters, that of the *Kuro-shiwo* (Black Current) or Japanese Gulf-stream is by far the most striking and important. The Kuro-shiwo begins between Luzon and Formosa, near the Bashee Islands, northwards of lat. 20°, flows from here on the east side of Formosa, along the south of Riukiu until about the 26th parallel, where a bifurcation takes place, the main current turning north-eastwards and reaching to the east coasts of the great Japanese islands of Kiushiu, Shikoku and Honshiu in succession, while a small arm retains the northerly direction, rushing round the west of Kiushiu and Gôtô and eastwards of Tsushima entering the sea of Japan through the Krusenstern straits. Von Schrenk, the hydrographer of the parts of the Pacific bordering on East Siberia and Amurland has named this current, the Tsushima current. It flows across the eastern half of the Sea of Japan from south-west to north-east, proceed-

partly through the Tsugaru Straits, but principally through the Straits of La Pérouse, and soon loses itself in the southern part of the Sea of Okhotsk. It washes the west of Yezo and the south-east of Saghalien, and may be observed here as far as the Bay of Patience. The main current of the Kuro-shiwo north of lat. 38° takes a more easterly direction, finally bending south of the Aleutian islands towards the coast of North America, which it follows from the north-west from Sitka to Cape St. Lucas under the name of the "North Pacific drift." Only a small portion of the Kuro-shiwo appears to maintain the north-easterly direction northwards of lat. 38° , and at some distance from the coast between Kamtschatka and the Aleutian islands to flow into Behring's Sea.

After passing the northern extremity of Formosa on the way from Hong-Kong to Yokohama, the Kuro-shiwo is soon entered. A strikingly restless movement of the water and an appreciable increase of temperature make the transition obvious even to persons who are unaccustomed to follow such matters with attention. The current runs here 30 or 40 knots—in winter much more—to the north-east and indicates a temperature 4° or 5° C. higher than the neighbouring sea. Under a cloudy sky its colour is grey, in sunshine deep dark-blue, and this conspicuously dark tint is the cause of the name, for the Japanese sailor does not distinguish between dark-blue and black. On the 19th December, 1873, its temperature at $29^{\circ} 24' N.$ and $128^{\circ} 18' E.$ long. was $23^{\circ} C.$ and rose somewhat higher on the following day under 130 long. between the islands Suwo-shima and Akiu-shima. According to the observations on board the P. and O. steamer *Avoca*, the water reaches here in late summer 27° , and is therefore only 3 degrees below the highest temperature of the Atlantic Gulf-stream. At the same time (end of September) the voyager who leaves the harbour of Hakodate and steers southwards to Yokohama finds that on the coast of Nambu in $39^{\circ} N.$ the temperature of the sea within an hour rises from 20° to $25.5^{\circ} C.$ In this way as well as by other changes in the water he observes that the cold arctic current is left behind and that he has entered the Kuro-shiwo.

In the year 1827, Captain Beechey on his journey from Port Lloyd (Bonin Islands) to Petropawlovsk observed the following sea-temperatures:—

25 June in lat. $38^{\circ}30' N.$, long. $154^{\circ} 16' E.$ $18.4^{\circ} C.$
 26 " " $40^{\circ}07' N.$, " $156^{\circ} 53' E.$ $11.4^{\circ} C.$

this makes therefore a difference of $7^{\circ} C.$ in the transit from the Japanese current into the cold northern current. In winter the change of temperature is often much more striking still, and reaches 8° – $10^{\circ} C.$ in a few hours passage.

South-west of Gotô and Nagasaki, in the western arm of the the warm current, the temperature rises in August and September

to 28° C. and falls towards spring down to 17° C. In the Tsushima current the Japanese Sea at the beginning of May has a temperature of 19°–20° C., *i.e.* about two degrees less than the main current south of Yedo under the same latitude. Finally, it may be mentioned that between Wladiwostok and the south-west of Yezo elevations of temperature of 6°–8° at all times of the year also closely indicate the transition from the cold coast-current into the Tsushima current. On the north-west side this transition into the Kuro-shiwo here as in the Pacific is sudden and the rise of temperature in air and water very perceptible, while less striking on the south-east side.

It is known that this current, like the Gulf-stream, decreases in speed, depth and temperature, but notably increases in breadth as it runs northwards. At 140° E. long. it stretches from Muninto to Cape King at the south of Yedo Bay.¹ On the margin of the Kuro-shiwo, where it meets with the cold arctic counter currents or breaks on the sluggish waters of the Pacific, as well as in its higher course, where islands, especially Riu-Kiu, and shallows produce eddies and whirlpools, there prevail continually lofty breakers and mighty waves. Then violent rain-showers—in the north also thick fogs—are very frequent, and the seldom quiet sea surges and struggles at all seasons of the year.

The monsoons have by no means the influence upon the extent and direction of the Kuro-shiwo that one would expect, and much less upon its force. The causes are very different from those of the drift-currents, and accordingly Croll's view, that the direction of an ocean current corresponds with that of the prevailing wind, by no means applies to the Japanese current.

The Kuro-shiwo was observed by the Dutch navigator, Vries, as early as 1643, on his voyage in the ship *Castricum*,² and is also mentioned by many later discoverers, particularly by Broughton and Krusenstern. Our more exact knowledge of its whole course dates, however, only from the time of Perry's expedition, since which the earlier little known Japanese waters have been crossed by war and merchant vessels in all directions.

If we compare the Kuro-shiwo with the Atlantic Gulf-stream, we find a very great similarity between them. As the Gulf-stream owes its existence to the equatorial current in the Atlantic Ocean and to the projecting Central American coast, its direction and its wide extent to the axial rotation of the earth and in its further course also to the south-west passage, so too the origin of the Japanese current must be ascribed to the equatorial current of the

¹ The *Challenger* crossed it (June, July, 1875) on its course from the Admiralty Islands to Yokohama between 34° 37' N. and 35° 18' N. and found its breadth here = 40 nautical miles.

² Reize van Maarten Gerritz Vries in 1643 naar het noorden en oosten van Japan. Uitgegeven door P. A. Leupe. Amsterdam, 1853.

Pacific Ocean and to the peculiar coast formation of eastern Asia and its course referred to the rotation of the earth and the influence of the monsoons. But while the greatest portion of the Gulf-water finally enters the arctic region between North Europe and Spitzbergen, the Kuro-shiwo is prevented from entering Behring's and the Polar Sea by the volcanic chain running from Yezo to Kamtschatka and from here past the Aleutian islands and Alaska to the American continent. The north of the Pacific Ocean is very much more of a cul de sac than that of the Atlantic, as is shown by a glance at its much more enclosed outlines; for here the narrow Behring's Strait with a depth of only 180 feet is the only connecting link with the Arctic Ocean. The Palæocrystic Sea of the extreme north, as the source of cold arctic currents, sends its ice-masses unhindered southwards through Smith's Sound as well as along the east coast of Greenland, but by means of Behring's Strait only a little polar ice makes its way into the Pacific, and the Kuro-shiwo meets no ice-bergs like the Gulf-stream.

The warmer water of the Kuro-shiwo may be followed to a depth of 500 fathoms, but at all depths it remains about 2° or 3° of temperature behind that of the Gulf-stream at the same latitude and depth. Thus then the two most conspicuous ocean currents are alike in nature, origin and direction, and only differ essentially in respect of intensity and of the latest portions of their course.

The cold currents in the Northern Pacific which touch Japan or have a mediate influence upon its climate, have their origin partly in the Sea of Okhotsk, partly in Behring's Sea. Schrenk distinguishes in the former no less than three, which he denotes as the Kurile, the Saghalien and the Liman currents. The last is a coast-current from the north-west of the Sea of Okhotsk which runs by on the continent of East Asia, between it and the island of Saghalien (Jap. Karafto), is flooded by the cold water of the Amur, and finally runs southwards through the Tataric channel along the west coast of the Sea of Japan. Schrenk could still detect it near Wladiwostock. It is however hardly doubtful that through Broughton Straits between Tsushima and Korea it reaches the Yellow Sea, and here during the greater part of the year, reinforced by the cold waters of the Chinese rivers, is perceptible under the influence of the north-east monsoon as far as the Straits of Formosa. Accordingly in winter, sailing ships choose the course to Japan by the east of Formosa.

The Liman current forms a parallel to the Labrador current along the North American coast, and as that carries to the shores of England's North American colonies and of the United States great wealth of fish, molluscs, and crustacea, so too the East-Asiatic coast-current brings to Korea and China a quantity of valuable marine creatures, in the catching and preparation of which hundreds of thousands of people find their living.

While then the Liman current touches Saghalien on the north-

west, this island is washed on the east by a weaker current from the Sea of Okhotsk, the Saghalien current, which at Cape Patience mingles and loses itself in the warmer waters of the Tsushima current, which enter through the Straits of La Pérouse.

Where in the north-east the Sea of Okhotsk with the bay of Penschina and of Gischiga strikes deeply into icy Siberia, is the source of the Kurile current. Along the west coast of Kamtschatka it runs towards the Kuriles, which it washes in their whole length after receiving a weaker current from the east side of the great Siberian peninsula near Cape Lopatka. Then it washes the north and east of Yezo, and has here even in the height of summer a very low temperature of hardly 5° C. Finally on the eastern shores of Nambu in lat. 39° this arctic current is reduced in summer to a narrow strip of a coast current, while in winter it penetrates a degree further south. This cold sea-current is called by the Japanese Oya-shiwo. It has a dark troubled colour and in this respect, too, contrasts strikingly with the dark-blue water of the warm current. The recent investigations of the *Challenger* and the *Tuscarora* have confirmed the observations made by German men-of-war, and proved that on the northern margin of the Kuro-shiwo strips of this and of the cold arctic current several times change places with each other. In the Straits of La Pérouse the warm current keeps the water constantly open, but on the north and east coast of Yezo, which is washed by the Oya-shiwo, the sea is in winter covered with thick ice for five to ten miles.

Let us finally consider the drift currents produced on the Japanese coasts by the monsoons.

When in summer a south wind blows for several days together in the Gulf of Finland, the water at the bathing place Sweaborg rises and it becomes warmer, while on the contrary the water at Reval falls and becomes cold. A continuous north wind produces the converse effect and carries the warm water on the surface of the Gulf of Finland to its south coast. As the winds act here upon a small scale, so the monsoons have a far more important influence upon the surface water in the East-Asiatic seas and bays.

On the south side of the little island of Eno-shima, near Yokohama, which has become famous for its flint-sponges, there is a cave in which may be seen a small Buddha-temple, dedicated to the goddess Benten. This must at the outset of the south-west monsoon, *i.e.* every spring, be removed 12 or 15 feet farther back, because here, as on all the southern coasts of Japan, the winds dam up the water through the summer and drive it at least 1 to 2 feet higher than it generally stands in winter. This effect extends of course to the water of the Kuro-shiwo, too, which during the prevalence of the south-west monsoon impinges directly on the south and south-east coasts of Japan, and essentially contributes to bring about the very high temperatures which prevail at this time. Generally speaking, however, the warmth of the water in shallow

bays will essentially depend upon local circumstances, upon the force of insolation, the mass and temperature of the river water, the prevailing direction of the wind, and the consequent drift current. From all these causes the bays of the Japanese islands are in summer very warm, in winter cold. In the harbour of Yokohama the temperature of the water in winter sinks at times from 8° to 9° C. ; from April to September it rises from 12° to 28° C. More uniform appears to be the temperature of the Inland Sea. But in its eastern portion, probably under the influence of the water of the Yodogawa and other rivers, the temperature likewise falls to 9° C., then to rise again gradually as at Yokohama, as has been observed in the harbour of Kobe. Moreover in other parts of the Inland Sea the water has in winter a lower, in summer an essentially higher, temperature, than in the neighbouring open seas. These circumstances have a great influence especially upon the fisheries, as will be more fully shown in another chapter.

III.

GEOLOGICAL CONDITIONS.

A. STATE OF OUR KNOWLEDGE, AND STRUCTURE OF THE ISLANDS.

THE native of Japan knew and sought ores to make into metal, clay for his ceramic industry, lime as a manure, rock crystals as jewels, sulphur for the preparation of gunpowder, but with his light wooden buildings he required little building stone, and worked only a few quarries. For granite, trachyte, lava, sericite, which he worked and used for the Cyclopean walls of his castles, for stairs and stone turrets in temples, for the bridging of ditches, for tombstones and other monuments, he had no names, but rather called them from the place where he found them or whence he brought them. Thus I know of a sort of granite block which is called Teshima-ishi (Teshima stone), of another which is called Mikawa-ishi, etc. As, however, animated nature is more attractive to man than the mineral kingdom, and he much sooner and more easily learns to distinguish and name the individuals, species and families of animals and plants than of mineral bodies, so it is here also. The Japanese met with fossils contained in the ground; he collected them as curiosities, desired for himself explanations of their occurrence, but found no one to teach him. The doctors in the service of the Dutch company, who rendered very great services as botanists, and to some extent also as zoologists, knew nothing in the sphere of mineralogy and geology, and were not in a position to supply the necessary instruction and stimulus.

After the re-opening of Japan, natives, as well as strangers, were above all things anxious to win the fabled treasures of the earth. Mining engineers from America, England, France, and Germany were engaged, and for the most part again dismissed, without having realized what had been expected of them. In fact, the store of most metals, such as gold, silver, tin, lead, zinc, quicksilver, is a very modest one, and will never be able to compare with that of many other countries. Copper and antimony are more plentiful, but it is only in iron and coal that the country is rich. The former is chiefly found as magnetic iron ore in great masses or as iron-sand in the river beds or on the coasts; coal appears in many small seams in various parts of the country, especially in Yezo, and from the oldest anthracite coal to the most recent peat,

yet nowhere in great thickness, nor of such good quality as many kinds of European coal. Petroleum is obtained in several provinces, but far from enough for the demand. Rock salt is not found.¹

No part of the natural history of Japan has hitherto had so little attention as its geology. What we know of it is but a few fragments gathered here and there. But the numerous disturbances of their stratification which the framework of the islands and the various sedimentary formations have experienced through eruptions and other kinds of volcanic activity, render the nature of the stratification and the mutual relations of the strata in part very complicated, so that it needs long and comprehensive enquiries to be systematically instituted in order to gain a perfectly clear picture of them. The need of this appears moreover recently to have been more keenly felt by the Japanese Government, and it is pleasant to observe that they have recently engaged men chiefly Germans, who by their whole scientific training justify us in hoping that here at length a long neglected field will be successfully cultivated.

It was not in the province of my special duties in Japan to institute geological investigations, although I had abundant opportunities during my journeys. Often, of course, I could only take a cursory note of what lay in my way, gladly as I would have pursued further many an interesting side-view. If I, nevertheless, attempt in the following pages to draw upon my observations, and, so far as is possible, to arrange them into a whole, my essential reasons for doing so are these two. In the first place, with a view to the completeness of the scientific picture which I have undertaken to give of the country, I cannot omit the geology, and in the next place I constantly had opportunity even in this department to make an observation or discovery of general interest, and thus, therefore, these contributions may find and deserve a place here. The incompleteness, indeed, of my geological observations I am aware of, and no one can regret it more than I do myself. Above all, I regret that von Richthofen's more complete and thorough studies of this kind in Southern Japan, especially in Kiushiu and Amakusa, have not yet been published; they would have been a sure guide to me in forming a judgment of many phenomena in these islands.

As von Richthofen has already pointed out seven years ago, there are in the mountain systems of Japan two main lines to be

¹ The calculations which have recently been made by American engineers in the service of the Colonial Government of Yezo, as to the abundance of coal and other valuable minerals, are open to many objections, and as to some of them better calculated to throw dust in the eyes of the Japanese than to give a true picture; yet this by no means applies to all of them, and in particular Lyman has already rendered very valuable services in the province of geology.

distinguished, which are clearly visible not only in relief, but also in their geological structure, viz., one from S.W. to N.E., and a second from S.S.W. to N.N.E. At the same time I must also indicate a third, which especially in middle Hondo finds expression in several chains and follows the direction of the meridian.

We may trace out the first system in two parallel main chains and in several side-chains in the southern portion of Old Japan. The southern main chain we may call those mountains which run through the island of Kiushiu in a northerly direction, which form the boundary between Higo and Satsuma on the one side, between Bungo and Hiuga on the other, and which are then continued over the narrowest passage of the Bungo-nada to Shikoku, following the long diameter of this island and in its further course traversing the peninsula Yamato: we will call it from its prevailing constitution the *Southern Schist-range*. Parallel to it stretches the range of Chiugoku, which may be farther traced on the one side through the north-west of Kiushiu, on the other by the boundary between Hokurokudô and Tôsandô to the middle and broadest part of Hondo.

To these parallel chains in the south correspond two other also parallel ranges in the northernmost part of Hondo, which like this stretch from S.S.W. towards N.N.E. The one—we may call it the *back-bone* of Hondo—separates Ôshiu from Dewa, the other we find between Kitakami-gawa and the Pacific. As it is principally constructed of old schist, we will call it the *Northern Schist-range*.

The connection of these two systems of parallel chains is in middle Hondo difficult to establish, chiefly because this part of the island has sustained the greatest disturbances through volcanic eruptions. If, however, we leave this out of view for the present, then we observe that here the third mountain-system already indicated has been chiefly developed. The meridional chain on the borders of Shinano and Hida, or the *Snow-range*, is its most conspicuous representative. Old crystalline massive rocks predominate in it.

In Kiushiu we recognise the direction from north to south of a mountain-range which traverses the island in its entire length from the Straits of Shimonoseki to the southern point of Ôsumi. This range crosses the southern schist range, seems to be frequently interrupted, and mixed with volcanic formation of considerable extent.¹

After these brief indications as to the orographical conditions of Old Japan, which will receive a fuller treatment in the next chapter, let us now turn to a closer consideration of the petrography. Three groups of rocks considerably predominate in Japan, viz.

¹ The correspondence in the direction and the relation in internal structure of the mountains of Japan with those of China, I must leave it to my respected friend and colleague von Richthofen to demonstrate, as the only competent authority upon this matter.

Plutonic rocks, especially granite; Volcanic rocks, principally trachyte and dolerite; and Palæozoic schists; while on the other hand lime- and sand-stone, particularly of the mesozoic strata, are strikingly deficient. Often the old crystalline rocks are for long distances overlaid by also very old schists and quartzites. Their strike in general follows the main direction of the islands from S.W. to N.E. This older range reaches on the average a height of 1,000–1,200 metres, and exceptionally of 2,000 metres and upwards. In some districts mesozoic sand- and lime-stone are found in connection with it, much more frequently tertiary formations. Volcanic masses break through and overlay all these rocks and deposits in innumerable places. Often they fill up gaps between them and appear to prevail for long distances, though frequently they form only the higher summits in the older mountains.

The basis of the island consists of granite, syenite, diorite, diabas and related kinds of rock, porphyry appearing comparatively seldom. Now the granite continuing for long distances forms the prevailing rock, then again it forms the foundation for thick strata of schist and sandstone, itself only appearing in valleys of erosion and river boulders, in rocky projections on the coast or in the ridges of the mountains. This is the case in Kiushiu and Shikoku especially, where I could ascertain its presence only in the river boulders, on the former island in various streams from the central meridional range, on Shikoku amongst others in the upper course of the Miyodo-gawa, which comes from Ischidzuchi-san. The beautiful stone, however, which is employed for the steps at Kotohira and at other temples in the island of Shikoku, does not come from this but from the granite-quarries of Te-shima on the coast of Bizen and is accordingly called Teshima-ishi.

In the composition of many mountains in Hondo, granite plays a prominent part. If I combine with what I saw in the neighbourhood of Kobe and Ōsaka, as well as on the side of the Inland Sea, the reports of Woeikof and various mining engineers, who have travelled through parts of Chiugoku, it appears that granite forms the central mass on this peninsula, which crops up in hundreds of places towards the coast and in the interior. Old schists free from fossils and rich in quartz overlay it in parallel chains through the whole length of the peninsula, especially in the central and highest ridges, and bear the ores of Chiugoku, principally copper pyrites and magnetic pyrites. These schist ridges rich in quartz show to a depth of 10 metres considerable disintegration. The resulting pebble and quartz-sand is very unproductive, supports chiefly a poor underwood and crippled pines with widely spreading roots seeking their nourishment afar. In the province of Setsu granite everywhere predominates, which may be observed also in the railway cuttings between Hiogo and Ōsaka, as well as in the temples and walls of these towns. The waterfalls near Kobe descend over granite walls, and the Mikage-ishi (stone of Mikage), famous throughout Japan,

is granite from Sestu. Of it consists, *e.g.* the water-stone (On-chôdzu-ya) in the temple-court of Nikkô, a monolith of considerable size, which rests upon tortoises and is always overflowed by fresh, clear water.

In the hill country on the borders of Ise, Owari, Mikawa and Tôtômi on the one side, Omi, Mino and Shinano on the other, granite frequently forms dark-grey, much disintegrated rock-projections above schist and diluvial quartz pebbles. The felspar of a splendid pegmatite and its products of disintegration on the borders of Owari, Mino and Mikawa form the raw material of the very extensive ceramic industry of this district with its chief place Seto.

Of granite are chiefly formed the meridional mountains of Shinano. It, diorite and other Plutonic rocks hem in the winding upper valleys of the Kiso-gawa, Sai-gawa and many other rivers of this province; their clear water runs over granite. Also in the hills bordering on the plain of Kuwantô these old crystalline rocks are widely spread. Farther northwards they give way again as in the south as compared with schists and eruptive rocks, yet even here may be traced in many places. Of course it is not always a pure granite; even *hablit* and granite-porphyry are found here and there. Thus for instance near Nikkô in the upper valley of the Daiya-gawa, and in several other places in the neighbouring mountains, a granite-porphyry appears with large pale, flesh-coloured crystals of orthoclase, dull triclinic felspar, quartz and hornblende.

In the border range of Kotsuke and Echigo, diallag-bearing diabas-porphyrity, a dark stone found also in the *débris* of several tributaries of the upper Tone, has been plentifully developed on both sides of Mikuni-tôge.

B. GEOLOGICAL FORMATIONS.

Fossil remains have not yet been found in the thick old strata of schist, and it is therefore doubtful to which of the palæozoic formations they are to be assigned. In any case, however, those of the southern schist-range in Amakusa, Kiushiu and Shikoku belong to the same system. This is shown by their similar petrographical constitution and strike, as well as in Amakusa, Bungo and Iyo by the like occurrence of antimony and carbonates of copper.

The oldest and most interesting find in the southern schist-range¹ which I had the opportunity of observing, is that of serpentine and talc-slate on the two peninsulas, in which Kiushiu and Shikoku approach to 5 ri of each other on the Bungo-nada. The way from Funai, the chief town of Bungo, to the port of Saganoseki, which runs for the most part near the coast, rises about 2 ri from

I shall treat of ores, coal and kaolin, in a later volume on the mineral products and the branches of industries based upon them.

the port over several hills, consisting of steeply slanting strata of micaceous schist and sericite schists, rich in quartz, just as they occur in the Taunus range. Deeper and nearer to Saganoseki occurs dark, slaty lime, then talc-schist of slight depth, finally beautiful dark serpentine, upon which also is situated a portion of the town, which spreads over the narrow neck of the peninsula of the Bungo-nada as far as the Suwo-nada, and thus despite its small importance has command of two harbours. A phenomenon which struck the intelligent inhabitants, and to which they directed my attention, viz. that of two small neighbouring bays the shingle of the one exhibited only white stones, that the other only black, I was able to explain to them. In the one case the neighbouring rock is the dark serpentine and flinty schist, in the other cove quartzite occurs and remains as shingle after the decomposition of the softer schist. But the current prevents the shingle from the one bay from making its way into the other.

The rocks mentioned appear also in the peninsula of Shikoku looking towards Saganoseki with the same stratification, increased by thick strata of graywacke-schist and graywacke-sandstone which are also strongly developed in Kiushiu, as in fact they generally play a prominent part in the schist mountains of Japan. All the kinds of rock mentioned here, except the talc-schist, are also to be found represented in the mole of the harbour Yawatahama in Shikoku, which corresponds with Saganoseki. Gneiss is wanting on both sides. Green sericit-schists occur also on the road from Nagasaki to Mogi, a place lying 3 ri further south, from which the passage is made to Amakusa. Moreover, in the immediate neighbourhood of Nagasaki, elevated metamorphic schists seem everywhere to form the skeleton of the mountains, overlaid by volcanic and partly also by Neptunian formations.

Yet another remarkable section in the southern schist-range presented itself in Shikoku, on the road from Matsuyama in Iyo to Kochi in Tosa between the places Kumamachi and Higashigawa. In the midst of the forests (primæval forests they may well be called) arise on both sides of the road strikingly figured and shattered walls of rock running perpendicularly up to a height of 50-80 metres, and consisting of a conglomerate of graywacke, sericit-schist, quartz and iron flint, the single constituents of which are often as big as a man's head or fist.

I am acquainted with mica-gneiss and diorite from the shore of the island of Awaji, and with quartzite from the summit of the Omine-san in Yamato, both by specimens brought to me at my wish by friends from these places. The road through the peninsula Yamato from Wakayama over Yoshino to Yamata, in Ise was almost uninterruptedly over old schists and graywacke free from fossils, but the road lying northwards from Matsusaka in Ise over Iga, to Nara in Yamato, with which, as with the former, I made acquaintance in the summer of 1875, only touches such schistose

strata as it approaches Nara, but previously exhibits in Ise neo-tertiary formations, and later granite and a fine-grained gray syenite. The southern schist-range virtually ceases here. From the facts mentioned it may be gathered that it begins with azoic strata, upon which follow older members of the palæozoic group of formations in thick strata. Whether they are to be denoted as Silurian or Devonian, or whether both formations are represented, it is difficult to determine so long as we have no fossil remains from them.

In journeying from Sendai in a north-easterly direction towards the lower Kitakami the constantly increasing number of slabs of brownish-red and dark-green sericite-schist by which the dykes are bridged over, indicates that we are again approaching the realm of schist. The northern schist-range which we reach on crossing the river, exhibits in its rocks much similarity with the southern. Here also early crystalline rocks form the main basis, which is overlaid by clay-schists and graywacke-schists, deeper down also by older crystalline schists. Starting from the central chain, which forms at the same time the watershed between the Kitakami and the Pacific, long, generally shallow ridges follow each other in great numbers with a main tendency from west to east. Though for the most part not high, they fall steeply down towards the coast, where their dark graywacke-schists break the waves and form numerous beautiful bays. In several places limestone also occurs, which by means of the white veins of calcareous spar in the older blue-gray masses of limestone likewise denotes a higher geological age, as near Kisenuma and inland from Kamaishi, where are the beds of magnetic iron-ore. Here we find besides a layer of limestone, fine-grained diabas, epidote and garnet-rock, with which the magnetic ironstone is associated.

The road from Kamaishi to Morioka on the Kitakami bends between Tasobe and Otobe on the other side of Nagaoka-mura over an undulating hara (prairie), upon which occurs red jasper-rock (hornstone) in disintegrated clay-schist. This circumstance, as well as the cubes of iron pyrites in the jasper, vividly reminded us of the manganese masses observed under similar circumstances in the province Huelva in Andalusia. The petrographical appearance of jasper and clay-schist agrees strikingly with that in the Sierra Morena. The schist formation of the latter however belongs, as was shown by fossil discoveries some ten years ago, to the Culm, or sub-Carboniferous system, and not to the Silurian formation, as was earlier supposed, and accordingly I may here mention the conjecture that in the upper strata of the northern Japanese schist-range the lower coal formation is also represented.

Mountain limestone is found in several places. Near Mito, near Akasaka on the Nakasendô, and northwards of Kiôto, it has been certainly shown to exist, but may probably be found also elsewhere. Near Akasaka there are black, brownish-red, gray, often white,

striped limestones which are carved into all kinds of small objects, such as balls, eggs, boxes, ink-stones, and other things besides. Encrinite-stems are very frequent in them, still more fusulines, especially in the ashen-gray variety, which is quite full of them. On the polished surface the darker matrix appears everywhere thickly sown with gray-white, boat-shaped, elliptical and circular sections of them, and a keen eye even without the aid of a microscope can perceive their symmetrical cell-structure produced by the chamber-walls. Mighty blocks of the same stone, richer in encrinites than at Akasaka, are found in the forest near Kuruma, 3 ri north of Kiôto. I have no details as to its occurrence at Mito.

Most of the coal measures of Old Japan belong to recent formations, but according to Lyman, seams of the carboniferous system are to be found in Yezo. Whether the Permian system is represented in Japan appears still doubtful. Zechstein and cupriferous schist have not as yet been found; on the other hand, after the occurrence of porphyry in Kaga and Echiiu, and the reddish-brown colour of a hill-ridge to the south of Kosugi and 4 ri south-west of Toyama in Echiiu, which I saw only from a distance, it is not unlikely that the Lower New Red sandstone occurs here.

Members belonging to the Triassic system have not yet been discovered. Of the occurrence of the Jurassic formation I was the first to adduce reliable proofs as a result of my travels in Kaga in 1874. As this is of great interest in connection with geographical botany also, I may add here a few details.¹

The sources of the Tetori-gawa, the most important river in the province of Kaga, lie on the Haku-san in a snow-field of some 2,000 metres above the sea, which here covers the volcanic rock forming the summit—hornblende andesite. Further downwards, to about 800 metres above the sea, the river-bed is carried through a sandstone-breccia of reddish colour, enclosing pieces of quartz often as big as the fist, then follow sandstone and schist, and finally granite. In several places, however, these rocks are overlaid by trachytic lavas and once, deeper in the valley, by porphyry.

Following the way from Kanazawa through the valley to Ichinose at the foot of the Haku-san, which runs for the most part along the right bank of the river on the slope of the valley, we cross, near Kojima-mura, a tributary whose name, Nigorisumi-gawa, refers to the dirty water which it brings with it all the year through. It has cut its bed deeply into the narrow, steep-sided valley. Near its mouth, where a high bridge crosses it, limestone occurs on the right bank, clay-schist and graywacke-schist on the left; both, however, without fossils. Higher up, in the main valley, follows the village of Fukase, 12 ri from Kanazawa and 7 ri from Ichinose.

¹ To any one who wishes further information I recommend the work of my friend Dr. H. Geyler in the *Palæontographica*, N.F. iv. 5, entitled "Ueber fossile Pflanzen aus der Juraformation Japans," with five plates.

About midway between this place and the chief village, Ushikubi, which lies $2\frac{1}{2}$ ri further on, the road runs past great masses of fallen rock, consisting of the breccie above mentioned; then a place is reached where they occur in considerable masses and overlie dark schists (schistose sandstone). This crops out immediately on the left of the road, while its fragments partially cover the hill-side. Here I collected within the brief time at my disposal altogether 16 species of impressions of plants, belonging to the Middle Oölitic system or Dogger. Dr. Geyler has drawn fifteen of them and named them as follows:—*Thyrsopteris elongata* Glr., *Adiantites Amurensis* Heer, *Asplenium argutulum* Heer, *Pecopteris exiliformis* Glr. (closely related to *P. exilis* Phill., which occurs in Spitzbergen), *Pecopteris Saportana* Heer, *Zamites parvifolius* Glr., *Podozamites ensiformis* Heer, *P. tenuistriatus* Glr., *P. lanceolatus* L. H. var. *genuina*, *P. lanceolatus* L. H. var. *intermedia*, *P. lanceolatus* L. H. var. *Eichwaldi*, *P. Reinii* Glr. var. *latifolia*, *P. Reinii* Glr. var. *angustifolia*, *Cycadeospermum japonicum* Glr. and *Gingko sibirica* Heer.

We have here, therefore, the earliest prototypes of species still represented in the Flora of Japan. Geyler, comparing them with the Jurassic plant-remains of other districts, points to the close relationship with the Jurassic formation of East Siberia and of Amoorland, which O. Heer has worked out, and with that of Spitzbergen and England.

To my great regret I have had to leave it to later inquirers to study further this remarkable Dogger-formation of the Tetori-gawa valley. I do not doubt that they will soon succeed, by means of new discoveries, in reaching further interesting conclusions as to its distribution and relationships. Possibly, too, the grey-white limestone, which occurs between the mouth of the Kurobe and Hime, near Natamura and Omi in the south of Echigo on a precipitous sea coast, and reaches a depth of over 100 metres, belongs also to the Jura formation, though this is a mere conjecture, as in our brief visit we did not succeed in discovering any sufficient vouchers for this.

How far the chalk formation, which occurs also in Saghalien, is represented in Japan, I cannot exactly say, as I have not found any characteristic fossils belonging to it. It appears, however, that the best coal in Japan, that of the island of Taka-shima, as well as the sandstone at the entrance of the Bay of Nagasaki, must be reckoned as belonging to it. In Taka-shima grey-white, granular and micaceous sandstones strike from west to east and incline at angles of from 25° – 30° towards the north. In consequence of this the southern coast is the highest and most precipitous. Below the sandstone lies friable schistose clay; then follows a seam of coal 14 to 16 feet thick. The deepest shaft is only 150 feet deep. The workings begin on the side of Nagasaki, where the coal was earlier found and sink with a dip towards the north. This formation

appears to be found also on the other islands at the entrance of Nagasaki Bay. In several places here, however, the thick strata of sandstone are disrupted and tilted up.

It is obvious that tertiary formations cannot be wanting in a country that exhibits in all directions so many traces of recent volcanic activity. Yet only the younger groups of the formation appear to be developed. Neo-tertiary fossiliferous basins are met with on all the larger islands from Kiushiu to Saghalien, and doubtless in many cases also in Riukiu and the Kuriles. Even in the tertiary formation limestone almost everywhere gives way to sandstone and schistose marl. Of considerable thickness appear also fossiliferous beds of volcanic tufas and conglomerates. Most of the coal-measures of Japan belong to this formation, and are therefore properly peat-coals, although their appearance is in many cases more that of the harder coals. Yet they are externally distinguishable from the latter by their greater lightness, and still more by their streak. We will here simply mention only three tertiary formations which we had an opportunity to recognise as such, either through personal observation *in loco* or at least by their fossils, and regret that the latter still await a closer examination.

Of the coals of the island of Kiushiu, that of Mike in Chikugo plays the most important part. The pit is situated not far from the boundary towards Higo and the Shimabara-nada, in an evergreen forest in which a kind of cinnamon tree is conspicuous. Only a few feet below the red argillaceous sand lies earthy peat-coal of slight depth, then follows a stratum of friable clay-schist of half a metre thickness. It strikes from east to west and dips less than 20° towards the north-east. Here we find numerous leaf impressions of foliage plants, from which we conclude that the brownish black coal which now succeeds is at all events tertiary.

In Ise the tertiary formation is found developed on the way from Matsusaka through Iga to Nara in Yamato, and in the mountain-spurs about Kaido and Naka-no-mura. There are neo-tertiary strata of clay and friable sandstone, in parts of which well-preserved marine shells and remains of Echinidæ occur.

In Mino we find fossiliferous neo-tertiary strata, amongst others at Tsukiyoshi in the hill-country near the boundary of Owari, distant 1½ ri from the station Hosokute on Nakasendô and 10 ri from Owari-wan. It is a barren flat-ridged hill country, covered with diluvial sand and siliceous pebbles, out of which crop up here and there granite blocks of a greyish-black and much disintegrated. Cultivation is confined to the small valleys and basins. Immediately behind a few houses of Tsukiyoshi stretches a marly stratum of argillaceous sand from west to east and dips 6° northward. Sea-molluscs, univalves as well as bivalves, of still existing kinds are found in great numbers and well preserved. We find besides in spherical and ellipsoidal septaries worm (sponge?) holes. In a side valley north of the place, and about 200 metres above the sea,

the same fossils occur, but near them, in a stratum of clay-schist, numerous leaf-impressions of dicotyledonous trees still growing in Japan. These strata lean on the hill ridges and give one the impression that they had settled on the margin of a bay in the Ise-no-umi, which in earlier times had run much further into the land.

In Gifu we were shown well-preserved leaf-impressions and other tertiary fossils, also from various places in the district of Kamo (in the north of Tsukiyoshi).

There exist in the north-east of Owari near Seto entire hills consisting of the diluvial pebbles just mentioned, which are sometimes of a ferruginous yellow or red. They conceal here deposits of a quartz-conglomerate bound together, singularly enough, by asbolite (black cobalt ochre). It furnished the earliest cobalt-colour that was employed in the ceramic art of Japan, and which even yet lends its most striking character to the Seto-mono (Seto ware). Even now, when the country imports cobalt-oxide and other cobalt colours from Europe, this cobalt earth is likewise employed. The conglomerates are dug for around Seto, and the cobalt earth is obtained by a process which will be explained in the chapter on Ceramics in the second volume of the present work.

In the neighbouring provinces of Tokaidô, Mikawa, and Tôtômi, tertiary strata likewise occur, as was ascertained from leaf-impressions from these which were shown in exhibitions in Nagoya and elsewhere.

Trachyte tufas and sandy conglomerates form the precipitous crags along the peninsulas of Sagami and Katsusa-Awa. Sometimes the greyish-green strata are interchanged with bands of a black conglomerate rich in magnetic iron, extending to a thickness of $1\frac{1}{2}$ metres. These are likewise neo-tertiary and recent strata, as is seen from moulds as well as from the well-preserved layers of marine molluscs. Here and there too is found a layer of argillaceous sandstone full of leaf-impressions. Rich in fossils are especially the cliffs near Yokohama, as well as the deposits on the railway cutting near Shinagawa. The strata strike in this district also from east to west and dip towards the north at about 14° , so that going from the plain of Kuwantô southwards you mount with them. They overlie serpentine, diorite, and schistose rocks which occur in Katsusa-Awa as well as in Sagami.

The remarkable island group on the western margin of the Bay of Sendai, named Matsushima (or Pine-islands) after a place there, as well as the neighbouring hill-country, must also be assigned to the neo-tertiary formation. We have the reports of three visitors to them, viz., of Capt. St. John, of myself, and of Lyman, taking them in order of time. In the seventh part of the "*Mittheilungen der deutschen Gesellschaft*" I have published the following account of them: "Matsushima is not merely a village on the coast of this bay (of Sendai), but it is also the collective name for the 808 tiny islands and rocks with which the bay is sown. They rise steeply, yet on

the average only 10 to 15 metres high out of the sea,¹ are covered with brushwood and stunted pines and have the same geological structure as the neighbouring coast, from which it is obvious the sea has gradually separated them. It is a Japanese garden, which nature has here formed upon a large scale, and which pleases the natives much more than us Europeans. The grey-white walls of rock are washed and hollowed out beneath from the south-west. They consist of slightly inclined strata of grey-white, friable sandstone,² interrupted by a ferruginous conglomerate of sand and quartz. I examined them on several islands, but did not succeed in discovering any fossil remains whatever, that could afford any form fix their geological age; yet I do not doubt that they are neo-tertiary formations, such as are found also in several places on the Bay of Yedo."

In the neighbourhood of the village of Matsushima several of the islands lie so close to the shore that they might be connected with it by means of bridges. "The sea between them is everywhere shallow and its bottom covered with *zostera*," with this agrees again the remark of St. John, when he writes: "Unfortunately this fine space of protected water is merely a lagoon. At high tide it has about six feet of water." . . . "The foundation of these islands is either a yellow sandstone rock of soft texture, or grey grit, closely approaching conglomerate. The stratification is very distinct and horizontal; a few slips and faults I observed, but they were rare."

The sea has in various places hollowed out the little islands right through from one side to the other and produced natural bridges. Near Matsushima are found old abandoned cave-dwellings, which men once dug out in these soft rocks.

Lyman believes that he can identify the strata occurring here with those of the island of Yedo, which he has named the Horumiu group.

In Morioka the very friendly governor exhibited and gave to us tertiary fossils from the *Suye-no-matsu-yama*, near Ichinohe, situated 18 ri north-east of Morioka on the way to Awomori. The mountain is according to his description 2 ri high, and by his account has alternately solid and loose strata, in which the well-preserved marine molluscs in great numbers are embedded.

On the side of the Japanese Sea the province of Echigo is especially rich in tertiary strata. We had opportunity to observe

¹ "The highest of these islands is about 300 feet, the lowest about 30, generally speaking 60 to 80 feet in their mean height."—St. John. This agrees perfectly with my observations; but Lyman's estimate is quite wrong, when he writes: "The islands are various in size, from a few yards in diameter to several miles," and then continues: "The highest is perhaps Matsushima (? !), within sight of which, a couple of ri distant on the west, we passed in crossing the bay; but even that seemed not more than a thousand feet high, if so much."

² More accurately, marl-stone of volcanic tufa.

them in the southern part of it, on the side of the Hokurokudô from the sea-coast on into the neighbourhood of Zenkoji in Shinano. On the sea they occur between Itoi-gawa and Takata, especially between Musho-mura and Gochi-mura. Above a deep layer of clay-schist there occurs here a bright peat-coal almost two feet deep, with clearly recognisable fossils of pine; then follows clay again, and finally diluvial quartz-pebbles. In the neighbourhood of Takata a darker peat-coal is found near the surface, and in several places also petroleum.

Between Nojiri and Zenkoji spreads out an undulating tableland with an extensive fertile basin in which the station Mure lies. The colour of the soil is strikingly brown, like many peat-soils. Near Mure there occurs, close beside the road in a valley of erosion, foliate coal below the layer of humus.

Also out of the interior of the island of Sado we saw marine bivalve and leaf-impressions, which must be assigned to the neo-tertiary period. The limits between this and the post-tertiary deposits, which are to be attributed to secular elevation, require more thorough investigation to determine.

Finally I will not omit to mention that I could nowhere observe in my Japanese travels moraines, glacier-scorings, or other traces of the ice-age.

The geological conditions of the island of Yezo agree, so far as we gather them from the reports of Pumpelly, Lyman, and other American mining engineers, essentially with those of Old Japan. On the coast of Hakodate the easily disturbed Pluto-Neptunian rock reminds us of similar formations of the Bay of Sendai and the coasts of Kuwantô. In other places too the tufa-conglomerates and organic remains are not wanting. The coal of the island is for the most part also peat-coal and therefore little adapted for the production of coke and for use in smelting processes; and although so much noise has been made in words and figures over the great wealth of the island in coal, yet it remains the simple truth that neither in quality nor in the depth of the seam can it be compared even with the medium quality of European coals.

The older tertiary, the mesozoic formations, the Magnesian limestone and red sandstone of the Permian system appear to be entirely lacking in Yezo or to be but slightly developed. Pumpelly distinguishes the rocks which he found as (I.) Old metamorphic, (II.) Pluto-Neptunian, (III.) Recent, including the marine terrace deposits, and (IV.) Eruptive of all ages. Granulite and conglomerate breccie seemed to him to be the oldest metamorphic rocks; then he follows with aphanite, syenite-granite and diorite, as the older eruptive rocks. Black and grey clay-schists, associated with greenstones and in other places frequently disrupted by strikingly white porphyry veins, or traversed in all directions by quartz veins with iron pyrites, appear also in Yezo in many places and in great thickness.

C. EFFECTS OF SUBTERRANEAN FORCES.

I. VOLCANOES.

Traces of various kinds of volcanic activity meet us in Japan, we may almost say at every step.¹ Hundreds of its mountain summits, amongst them nearly all those of over 2,000 metres in height, were thus built up in the course of centuries upon a basis of crystalline rocks and older schists, or directly upon the once fertile alluvial plains, as is shown by the constitution of their rocks. Mighty lava-streams flowed down from the heights and spread themselves out on the sides of the mountains, while powerful masses of steam drove the glowing ashes high into the air, so that they obscured the sun, and partly falling in showers of dust at the foot of the mountain ever extended its borders, partly seized and carried away by violent winds only fell again to earth at great distances and formed deposits in places where we should little suspect their existence. These phenomena moreover by no means belong only to bygone ages; for besides at least a hundred so-called extinct volcanoes, there are still in Japan a number in whose depths there is a rolling and hissing as of a troubled sea, from which glowing steam continually arises, a landmark to sailors in the darkness of night, and which from time to time send forth their destructive lava streams or clouds of ashes. And who can say whether, in this or that "extinct volcano" there may not suddenly occur a new eruption and a new cone be built up; as has so often happened in earlier times? In a considerable number of Japanese volcanoes we can point out old and more extended crater-walls, like the *somma* of Vesuvius, within which, or from the sides of which, after long quiescence a new and narrower crater opened and continued the task of piling up the mountain; nay, frequently a second and third repetition of the same phenomenon followed. Thus also in the Japanese volcanoes we can by the position and constitution of the different craters and their offshoots fix in their main features various periods of their activity, just as surely as an historian demonstrates the periods in the history of a people. In most cases also in Japanese volcanoes the gentle rise of the cone at its base passes into ever steeper heights as it mounts upward. The width of the crater in the last crater-formation of the extinct as well as of the still active volcanoes, is on the average from 600 to 800 metres; while in those which can be recognised as the oldest eruptions, it was often three or four times as large, and its extent may remind us of the mighty craters of Kilauea and Mokuaweoweo in Hawaii. The steepest parts of Japanese volcanoes which I have visited and measured

¹ Least in Shikoku, Awaji, Chiugoku, and the larger islands of the Japanese Sea, such as Sado and Tsu-shima.

showed an escarpment of between 30° or 40° , while the gentle rise at the foot often has for long distances, as in the case of Ganju-san in Nambu, an inclination of between 2° and 4° . It is true that even in volcanic mountains contour and steepness are dependent upon many circumstances, amongst which those of greatest moment are the constitution of the erupted matter and the prevailing direction of the wind at the time of eruption, especially if the ejected matter consists, not of lava, but of big rock-fragments, lapilli and ashes; but, above all, the surroundings and the relative position of the successive craters. If we examine with reference to the latter circumstances the volcanoes especially notable for the form of their cone: Fuji-no-yama, Chôkai-san, Ganju-san, Iwakisan, Mioko-san, and other considerable peaks, not to speak of the numerous smaller ones, we find that they rise more or less away from the older mountains, that they rise freely on almost all sides from the plain, and that the craters which succeeded each other in in point of time have a more or less concentric position towards each other. When, on the other hand, one of these conditions is wanting, the cone-form is either not developed at all, or only towards the peak of the mountain. Thus, Ontake forms, corresponding to the disposition of its eight craters on the summit, a long ridge from north to south; thus Asama-yama only rises up at its peak and only from the south and east sides as a cone, not on the north-west side, where it is connected with a mountain chain. In Fuji-san only the last summit-craters are clearly traceable; and it may be assumed that by its eruptions the earlier, deeper-lying crater-walls have been entirely covered.

In nearly all Japanese volcanoes lava streams in the later stages of eruption are much less important factors than the detached ejecta. This fact and abundant rainfalls in summer, as well as the resulting luxuriant vegetation, which in time more or less covers even the lava-fields, are doubtless the principal cause why we do not find in the volcanic districts of Japan such imposingly desolate, wildly broken and fissured lava-fields as in Iceland or the Canaries. There is almost an entire absence also of the towering columns and wall-like battlements of other volcanic districts. Obviously volcanic activity has been very effective in modern geological ages, as erosion was not yet powerful enough to produce such deep indentations. I know in fact only one part of the country where the relief of the volcanic mountains for a considerable distance entirely leaves the prevailing softer forms and rises to bolder and more picturesquely beautiful contours, namely the north-western portion of Jôshiu, where beside the Echigo-kaidô, about midway between Takasaki and Mikuni-tôge, vertical, columnar trachyt-formations mount up to a considerable height. Here, when in summer the deciduous trees and shrubs, which grow at the foot and from the chasms in these cliffs, are clad in green, and lovely ferns partly veil the grey rock, it needs

little imagination to be reminded of the ruins of magnificent old castles. Also on the south-west side of this province, south of Nakasendô and Usui-tôge the dark peaks of Miogisan and the neighbouring mountains, probably consisting of doleritic lava, rise from the beautiful forests wildly broken into the semblance of towers.

We may finally observe with regard to the constitution of the volcanic rocks, that in the more recent eruptions doleritic lavas everywhere greatly predominate, while in the older eruptions trachyte plays a prominent part, though rhyolite and beautiful andesite are not uncommon. Thus, for instance, we find the summit of Haku-san constructed of andesite, and also in the peninsula of Shimabara, east of Nagasaki, and accordingly in a very remote part, this rock is very widely distributed. Its great crystals of hornblende and oligoclase have frequently led unscientific people here to call it porphyry.¹ For obsidian we search in vain in most Japanese volcanoes, and so too pumice-stone does not occur in all of them, although it is often found in large masses. Thus blocks of pumice and pumice-sand stretch in Kiushiu from Kirishima-yama toward the south-west as far down as the Bay of Kagoshima. On the north side of this inlet, opposite the island of Sakura-jima, where the road from Kagoshima to Kajiki is bordered by great volcanic rock-fragments, we find in the spherulite mass many balls of obsidian, from the size of peas to that of cherries.

As in the trachytic rocks phonolite, so in the basic rocks basalt plays a very subordinate part. It is represented by dolerite which is found in the most various shades of colour, from light grey to greyish black, in some cases fine-grained and compact, in others porous as a sponge. In its disintegration it frequently exhibits the familiar concentric peeling and finally forms a very fertile loam, as, for instance, in Gumai-gori in the province of Kôshiu and on the road from Nagasaki to Omura Bay. Not uncommonly the highly-esteemed terrace-culture, as for instance about Nagasaki, depends upon these products of disintegration, and ceases as soon as they are replaced by a poorer clay soil. In Amakusa, indeed, where this is the only soil, terraces have been formed on the schistose hillsides; yet here the pains and industry of the inhabitants are rewarded by but scanty harvests.

A beautiful example of older doleritic lava of very porous composition occurs at Saruhashi north-east of Fuji-san on the Kôshiu-kaidô. Here a handsome wooden bridge 17 ken long runs across the Katsura-gawa, whose bed is enclosed by perpendicular walls of rock. The section exhibits below old chloritic schists, and over

¹ How far andesites generally are older than trachyte and rhyolite, my observations do not enable me to say with certainty. Rhyolites, it is certain, always lies deeper than dolerite, where both occur. The disruption of the crater of Haku-san and the composition of the abundant flora there point to a very old formation of the andesite which prevails there.

them a covering of greyish-black spongy dolerite, upon which also lies this charmingly situated place.

Our knowledge of the Japanese volcanoes,—and I am here speaking only of the conical volcanoes which chiefly meet the eye,—is as yet very slight. It is confined for the most part to the names and position of the most prominent summits, of whose eruptions we have trustworthy reports within historical times. Only a small part of them have as yet been ascended by foreigners; and much smaller still, of course, is the number of them which have been visited by a scientific geologist. A considerable number of other mountains, which I passed in my travels, or whose summits I observed from other heights, are doubtless also stratified volcanoes with equally well preserved craters, although they are hardly known even by name. Thus we may, for instance, include, perhaps without exception, the numerous Komagatake and Mitake of which only a few have as yet been examined. It is obvious therefore, under these circumstances, how slight is the value of those data as to the number of volcanoes in Japan, and especially as to the number of still active ones, which we find in many books.

The distinction between active and extinct volcanoes, as has already often been pointed out, is a matter of great doubt and difficulty. Are those volcanoes of whose eruptions we have no historical evidences to be reckoned as extinct, even where their craters are fresh and well preserved and as yet uninfluenced by erosion and the growth of vegetation? Do others, whose crater-walls have partly fallen in and are covered with vegetation, on the floor of whose craters we can stand freely and safely as on a mountain ridge, still belong to active ones, merely because it can be proved that an eruption took place a hundred or a thousand years ago? Naumann, in fact, appears to have proceeded upon the latter principle when he indicates the following mountains as active volcanoes in the map to his essay on "Earthquakes and Volcanic Outbreaks in Japan"¹: — Asama-yama, Fuji-san, Shirane-san (Shirane-yama, in the hills of Nikkô), Nasu-yama, Iwate-yama, Yake-yama, Arima-fuji, Aso-yama, Onzen-ga-take, Sakura-jima, Iwoshima, Ôshima, Kosashima, Miyakoshima, Hachijio, and Aogashima. As opposed to these, he denotes as extinct volcanoes (of Old Japan, for his information is confined to this), the following nineteen:—Iwaki-yama, Chôkai-san, Bandai-san, Takahara-yama, Akagi-san, Haruna-yama, Kusatsu-yama, Mioko-san, Yake-yama, Renge-san, Tade-yama, Mazuga-take, Haku-san, Mi-take, Daisen, Hakone-yama, Amagi-san, Kirishima-yama, Kaimon-take.

It would, however, never occur to any one who knows them that Kirishima-yama, Ontake and many other volcanic mountains in the second list, with their freshly burnt-out craters and solfataras

¹ "Mittheilungen der deutschen Gesellschaft," etc. Heft 15. (Yokohama, 1878.)

at a considerable height, are really extinct in a higher degree than Fuji-no-yama with its accessible crater-bottom and complete absence of any kind of volcanic activity. If we really wish to attain the proper distinction, there is but one trustworthy criterion, and that is the present state of the crater. If its bottom is inaccessible, because water and sulphurous vapours continually escape from it, even though it be merely from a solfatara covering it, the volcano appears to be active, otherwise to be quiescent or extinct, which, of course, does not exclude the possibility that, though extinct, it may suddenly break out afresh after a rest often of centuries, as is shown by many examples in Japan and elsewhere. From this point of view the Japanese Empire, so far as our present knowledge extends, has altogether eighteen still active volcanoes. They are the following:—

- | | |
|--|--------------|
| 1. Chacha-take on the Kurile Island Kunashiri. | |
| 2. Iwao-san in Kitami | } Yezo. |
| 3. Meakan in Kushiro | |
| 4. Iwanai-nobori in Shiribeshi | |
| 5. Tarumai-take in Iburi | |
| 6. Nuburibetsu-take in Iburi | |
| 7. Usu-take in Iburi | |
| 8. Komaga-take in Ôshima | } Hondo. |
| 9. Te-san in Ôshima | |
| 10. Riishiri, volcanic island north-west of Yezo. | |
| 11. Asama-yama in Shinano | } Shichi-tô. |
| 12. Shirane-yama in the mountains of Nikkô | |
| 13. Mihara-yama in Ô-shima | } Riukiu. |
| 14. Nanahiro-yama in Miyake-shima | |
| 15. Asô-yama in Higo, Kiushiu. | |
| 16. Iwo-ga-shima, south-west of Satano-saki on Kiushiu. | |
| 17. Suwa-ga-shima, one of the Seven-sisters, or Lin-schoten-Islands. | |
| 18. Tori-shima (Iwo-shima), Ôshima Group. | |

The last destructive eruptions of these volcanoes of which we know occurred: at Tarumai-take, March, 1867, and February, 1874; Komagatake, September, 1856; Shirane-yama, June, 1872; Asama-yama, 1783; Mihara-yama in Ô-shima, 1877; Nanahiro-yama (Otoko-yama) in Miyake-shima, July, 1874; Asô-yama, March, 1874.

As to the eruption in Miyake-shima, the following report was made at the time to the Ministry of the Interior in Tôkiô:—"On the 3rd of July, 1874, at 11 a.m., the eruption of Nanahiro-yama began with a loud noise. The earth trembled and rumbled with unprecedented violence. For Kamizuki-mura, at the foot of the mountain, there was no time for escaping, except in the case of one family. About twelve o'clock the old crater (Ô-ana, the great hole) sent forth great masses of rock, like little

hills(?) and ashes to the distance of a ri, and a great piece of the sea 15 chô (1636 m.) long and 3-4 chô broad was lifted up and became dry land. Small craters were formed around the old one and sent out stones on high. These as they fell crumbled into red-hot sand. The whole country was covered with it to the depth of some six metres. Near Omori, to the east of Kamizuki-mura, four new hills were suddenly formed, each about five chô high and a ri in circumference. On the 10th of July showers of ashes were still falling." Previous warnings of the occurrence of this eruption are not mentioned, though it struck the people that as early as January the Yama-sakura trees (*Prunus pseudo-cerasus*) in the mountain forest had bloomed, though the blossoms ordinarily appear only in April.

Asama-yama is the most imposing of all the still active volcanoes of Japan. Its lava is doleritic, like that of On-take and Fuji-san, and obsidian is not observable. More recent eruptions have produced only showers of ashes; while the last lava-stream, nearly a hundred years ago, flowed northward to the bed of the Agatsuma-gawa and then following this towards the east. This lava-field, whose greyish-black masses of rock are mingled in unusually wild confusion,—an uncommon phenomenon in Japan,—may be partially observed from above. The fatal eruption from which it dates took place in the autumn of 1783 and spread its terror far and wide. The lava-stream destroyed a famous primeval forest and several villages. In its northern direction, as well as toward east and north-east, the glowing masses of rock flew far, and a dense shower of ashes turned the day into the darkness of night. The neighbourhood of Nakasendô between Oiwake and Usui-tôge, which was previously covered with arable land, was turned into a wilderness, while here and in the district of Adzuma, in the province of Kotsuke (basin of the Agatsuma-gawa) 48 villages and thousands of their inhabitants were destroyed by this terrible occurrence; monkeys, goats, dogs, and other animals succumbed to the rain of red-hot stones and ashes; and those which had previously found sufficient shelter perished of hunger, because the falling matters for many miles had covered the ground $\frac{3}{4}$ -1½ metres deep, and destroyed and buried all vegetation.

Of the other noteworthy volcanoes of Japan, it is known that the last great eruption occurred: in the case of Fuji-san, 1707, Onzen-ga-take, 1791-93; Mitake, in Sakura-jima, 1828. At that time the latter mountain was still continually smoking, as I was assured by people living at Kagoshima Bay. Kaempfer relates of Onzen-ga-také (Wunzen, as the mountain is named by most foreigners, is a corruption of the word), that he could descry the smoke ascending from its crater at a distance of fourteen miles. According to other reports, in the last eruption of the volcano 53,000 people lost their lives, for simultaneously with the destructive eruption a violent earthquake threw the sea into commotion, islands arose out of it,

and the briny floods overflowed their shores and consigned the people to a watery grave.

The last of the numerous devastating eruptions recorded in the history of Fuji-san continued from 24th November, 1707 until 22nd January, 1708. During this period a new crater was opened on the south side of the mountain, and the parasitic mound of Hôye-san was built up to the height of 2,865 metres. Of this terrible eruption, amongst others, a priest, whose temple was nine miles distant from the eastern base of Fuji-san relates as follows:—"Assuredly it is an unusual event, that, as was the case in 1707, Fuji-no-yama suddenly opened in a place overgrown with splendid trees to vomit fire, so that stones and showers of ashes flew about and fell down in Kuni's (provinces) and Kori's (districts). These showers of stones and ashes lasted for ten days, so that fields, temples, houses, etc., were covered with the ejected matters more than three metres deep. The dwellers in the neighbourhood of Fuji lost their homes, and many of them died of hunger. Of numerous villages not a single trace is left. I myself was one of the unhappy eye witnesses of this terrible eruption, and the remembrance of it fills me with pain and woe." Then are painted in lively colours all the terrors and confusions produced by the eruption, how the clouds of ashes turned the day into murky night, and the showers of ashes were accompanied by red-hot stones, which flew hissing through the air, and how at last the jarring din of earthquakes was added to make full the measure of utmost misery and helplessness. In Yedo there prevailed, according to another reporter, at the same time darkness by day and night, the earth shook, and the showers of ashes fell thicker and thicker, and at last covered roofs and streets sixteen centimetres deep. At the same time the noise of Fuji was heard quite plainly; and still further eastward, as far as the shores of the Pacific, the winds bore the dark dust-showers to the coasts of Shimosa and Awa-Kadsusa.

With regard to the distribution of the volcanoes of Japan, it appears hazardous in the present state of our knowledge to speak of any other arrangement than that which is produced by the succession of the islands, and the principal mountain-chains. In Hondo, which is best known, we can distinguish the three following series:—

1. Volcanoes which crown the ridges of the central mountain range or arise independently beside it, and form a series through the island from N.N.E. to S.S.W., in which occur the two Komagatake of Nambu, Zooga-take, Nasuyama, and somewhat more side-wards in the north Ganju-san, further south Bantai-san and the volcanoes of Nikkô.

2. Volcanoes which form a parallel range to the west of No. 1, with the prominent peaks of Iwaki-san, Chôkoi-san, Gas-san, Iide-san, Komaga-take, Yake-yama, Tate-yama, Haku-san.

3. A series of volcanic groups running from N.N.W. to S.S.E.,

embracing in eastern Shinano, Shirane-san, and Asama-yama, and to the left of the Chikuma-gawa, Yatsuga-take, and Tateshina, then in Suruga and Sagami Fuji and the Hakone range; and besides the peninsula of Idzu, and then continuing over the Shichitô to Munintô and the Marienne Islands.

A considerable number of other volcanoes is not embraced by these groups, but we are unable to generalize further.

II. HOT SPRINGS.

There is probably no country in the world which can rival Japan in hot springs. They may be counted by hundreds, are distributed over the whole empire, and by no means confined to volcanic districts. Sulphur springs and indifferent thermal waters predominate, while decidedly acid and saline waters are exceptions. Most of them, especially the indifferent ones, possess the high temperature of 40-50° C., which is a favourite bath temperature with the Japanese, while many others, especially sulphur springs, rise to the boiling point of water. The former point, by their approximately uniform temperature, to a common origin, or rather to an origin at the same depth, probably in the primary crystalline mountain range; while the hot sulphur springs for the most part occur in volcanic districts, principally at the foot of slopes of the recently quiescent volcanoes. In their bubbling and hissing, and in the ascending vapours of sulphuretted hydrogen, as well as in their destructive effects upon rocks and vegetation around, they are a feeble echo of the activity in the craters. Many of these numerous solfataras are called Ô-jigoku and Ko-jigoku, little and great hells, and are much used for bathing purposes, especially in syphilitic complaints. They are, moreover, important sources of sulphur in the country, for there is no doubt that most of the sulphur has been deposited from the sulphuretted hydrogen of such solfataras. Only a few of the most celebrated solfataras and sulphur baths of Japan can be mentioned here.

Yumoto, in the mountains of Nikkô, lies 1,537 metres high, in a small basin at the foot of the Shirane-yama. It is an old-fashioned place, with only ten houses, the inhabitants of which live by the powerful sulphur baths, which in summer attract many invalids. There are twelve different springs, the most important of which, to the north of the place, has a temperature of 69° C. The odour of the vapour of sulphuretted hydrogen fills the air for a long distance, and the water collects in a great pool, the milky colour of which strikes the eye afar.

Kusatsu, strong, much visited sulphur baths in Adzuma-gori (Jôshiu) 46 ri (112 English miles) N.W. of Tôkiô on the north side of Shirane-san. From fissures in volcanic breccia here issue forth extraordinarily powerful sulphur springs, with a heat of 70° C. The great wooden basins which first receive the water are incrustated an inch thick with sulphur.

The Riusan-jita, or hot springs, at the foot of Tate-yama (Riusan) or of Tashiwara. The pool above, called Ô-jigoku, which is about forty metres across, is said to be continually in violent commotion, and to give forth great quantities of vapour. Sulphur is collected from its margin.

The sulphur baths of Yamashiro-yama in Kaga have warm water of 70-71°.

Enoyu, on Kirishima-yama, at a height of 844 metres, is one of the greatest solfataras that I have observed. The water rises from the ground laden with sulphuretted hydrogen, and depositing much sulphur, at a temperature of 75°. Bathing goes on at a place where its temperature is still 44.5° C. The remaining solfataras between this place and Kirishima have partly the same, partly a still higher temperature.

Especially rich in thermal waters within a comparatively limited area are the Hakone range, and the peninsula of Idzu. In the former we find, in the neighbourhood of the highest summits, a whole number of solfataras, the temperatures of their springs lying between 90° and 100° C. One of the most striking of them is found on the Jigoku-yama (Hell-mountain) or Kamuriga-take. It may be recognised even from Sengoku-hara, by the ascending vapours, the white colour of the decomposed lava-tufa, and the surrounding absence of vegetation. A second, called Iwo-yama (Sulphur-mountain), lies at a height of 877 metres on the southern slope of the Komaga-take. It has also destroyed the vegetation and rocks far and near, and has at the same time bleached the latter. A part of its water is conducted to the watering-place, Ashinoyu, which is situated at a height of 845 metres, a couple of miles southwest of it in the direction of the town of Hakone. Not far from here is a Ko-jigoku, or weaker solfatara, with boiling water of the temperature of 95° C. Ashinoyu is the highest placed of the seven Hakone watering places. The six others, viz., Kiga, Sokokura, Miyanoshita, Dogashima, Tonosawa, and Yumoto, succeed each other in the narrow winding valley of the roaring Haya-gawa, which rises from the Hakone lake. There is a notable decrease in the temperature of their springs as we descend, so that while the highest at Sokokura indicates 83-85° C., Miyanoshita has 45-59°, Tonosawa and Yumoto only 43-45° C. All arise from the same lava-tufa, contain scarcely any traces of sulphur and small quantities of iron, mostly in Sokokura, where the temperature is highest. These Sokokura springs lie nearest to the solfataras at Ashinoyu. Is it not then conceivable that the sulphur-water of the latter, which directly loses itself again in the ground, loses its sulphur in its subterranean course, taking up small quantities of iron in exchange, and re-appears in the valley of the Haya-gawa at the watering-places mentioned as almost indifferent springs with decrease of temperature? More interesting, however, than this question, is the fact that the warm water, where it breaks out

of the grey-black rocks in many places immediately above the village of Sokokura by the side of the road to Kiga, and partly on the banks of the mountain-stream Susawa, supports a conferva at a temperature of 59°C . This fact was established by me in 1874 and 1875; and the temperature thus indicated may be said to be the highest at which natural vegetable life has as yet been observed.

Amongst the best known of the baths of the Peninsula of Idzu, and ranking next to the Hakone-baths, is Atami. O. Kuntze has called it the Karlsbad of Japan; though this is only in some measure true with reference to the bubbling, not as to the properties of the water. This in every respect nearly resembles that of the six lower Hakone-baths, even in point of temperature. Atami is the chief place of an entire thermal district. Of special interest however is the Geyser of Atami, so far as is known, the only one in Japan. At only 800 paces from the sea, its overheated water breaks forth at regular intervals in alternation with steam; this occurs six times in twenty-four hours, on each occasion for $1\frac{1}{2}$ hour, and rising to a height of 1-3 metres.

Arima in Setsu, lying about six hours' distance from Hiogo in the midst of a narrow mountain ravine, is the most frequented watering-place in Japan. The warm baths, of 38°C ., are richly chalybeate. Dwars, formerly the chemist of the Mint in Ōsaka, has made analyses of two of them, the results of which are here given:—

A. Water almost colourless, clear, without odour; the taste indicates the presence of much salt and iron. In the air it loses some carbonic acid, while the surface becomes covered with oxyhydrate of iron, which is later precipitated as a reddish-brown flocculent powder mixed with insoluble silicates. The specific gravity at 23°C . was 1.0115. One litre, = 1011.5 grammes, contains 19.655 grammes of solid constituents. These are:—

| | | |
|---|---------------------------------|---------------|
| Sodium chloride | Na Cl | ...14.717 gr. |
| Sodium bromide | Na Br | ... 0.105 " |
| Potassium chloride | K Cl | ... 1.281 " |
| Ammonium chloride | NH ₄ Cl | ... 0.013 " |
| Lithium chloride | Li Cl | ...traces |
| Magnesium chloride | Mg Cl ₂ | ... 0.241 " |
| Calcium chloride | Ca Cl ₂ | ... 2.896 " |
| Calcium sulphate | Ca SO ₄ | ... 0.014 " |
| Aluminium chloride | Al ₂ Cl ₆ | ... 0.029 " |
| Manganese proto-sesquioxide | Mn ₃ O ₄ | ... 0.055 " |
| (appears as bicarbonate of the manganese protoxide) | | |
| Iron sesquioxide | Fe ₂ O ₃ | ... 0.246 " |
| (appears as bicarbonate of the iron protoxide) | | |
| Silicic acid | Si O ₂ | ... 0.058 " |
| Organic substances | small quantities | |

19.655 gr.

E

Dwars compares this water with the Oranienquelle of Kreuznach, but finds it much richer in iron and common salt.

B. Cold spring of Arima, called Teppo-sui. It had on the 14th December, 1876, a temperature of 16.8° C. The water is colourless, clear, with an acid reaction; gives in a short time a precipitate of iron. Besides free carbonic acid, it contains also some sulphuretted hydrogen. At a temperature of 16.8° C. and 730 mm. (the spring is at a height of 400 metres) a litre of water contains 0.689 litre of free carbonic acid. The solid constituents in 10 litres of water were:—

| | |
|--|-----------------------|
| Sodium bicarbonate | 1.210 gr. |
| Sodium chloride | 0.038 " |
| Potassium chloride | 0.076 " |
| Calcium sulphate | 0.077 " |
| Calcium bicarbonate | 0.266 " |
| Magnesium bicarbonate | 0.043 " |
| Aluminium oxide (clay) | small quantity |
| Iron bicarbonate | 0.125 gr. |
| Manganese bicarbonate | 0.021 " |
| Silicic acid and insoluble silicates | 0.065 " |
| Organic matters | small quantity |
| | <hr/> |
| | 1.921 gr. or |
| | 0.1921 gr. per litre. |

Six ri (14.6 English miles) to the north of Wakamatsu I found on the road to Yonezawa in a volcanic ravine the place Oshiu, on both sides of a small stream which crosses the road. Near the latter two springs are found close to the somewhat elevated right bank, each of which delivers in four to five minutes a shô (1.8 litre) of water, which flows unused directly into the stream. The temperature of the upper spring is 39° C., of the lower 38° . Great quantities of carbonic acid escape, a great deal of iron hydroxide is precipitated, and the peculiarly salt and astringent taste of the water also points to the presence of abundant salt and iron. In this respect, as well as in its temperature, it has much similarity to the baths of Arima. Unfortunately I had not time to analyse the water I took away with me.

Weak chalybeate springs, hot as well as cold, frequently occur. At Ichinose, for instance, at the foot of Haku-san, the bath has 38° – 39° of heat, develops much free carbonic acid, and an iron-slime is separated which is exported under the name of Yu-no-hana (warm-water-flower) and employed medicinally. Not far from Itaya in Oshiu on the road from Yonezawa to Fukushima may be observed in the midst of a wooded mountain ridge the lonely and beautifully situated old buildings of the watering place Goshiki-(Gozi ochiki?)no-yu. The water there is called Kin-yu (gold-water), because it is supposed to have the effect of the Kinder-

brunnen at Ems. According to the accounts of the inhabitants, it is a chalybeate spring, which is in summer much used by women.

Almost all the previously mentioned hot springs belong to volcanic territory; of the indifferent hot springs known to me personally, which occur in old shales, I mention Shika-no-yu near Yumoto, on the Aidzukaidô in Shimotsuke, with a temperature of 43° C., Takeo in Hizen 46° C., and Shimotsuke Fukei in Amakusa 42° C. All these springs remind one of Schlangenbad.

III. EARTHQUAKES.

Earthquakes are amongst the most awful and alarming phenomena. They are events against which man cannot arm or prepare himself in any way, which may surprise and destroy him at any moment. At one blow a violent earthquake rouses all the inhabitants of a populous town from deep slumber, and in an instant prepares a grave for thousands of them. An anxious presentiment of the approaching danger, such as Humboldt and several other travellers believe they have found in South America, is unknown in Japan; such a presentiment is incapable of explanation, and in my opinion rests upon some delusion. Earthquakes are frequent in Japan, from the slight vibration which a busy person hardly notices to those violent shocks which lift him up and fling him down, shatter rocks, and lay habitations in ruins. Such violent disturbances with strikingly destructive effects fortunately occur but seldom, that is to say, according to previous experience and expectation, about one in every twenty years. The last destructive earthquake, however took place in the autumn of 1855, so that already twenty-five years have elapsed without a recurrence, and the old rule apparently no longer holds.¹

In the mythological menagerie of the Japanese there is, according to some, in the depths of the sea a gigantic fish, which strikes against the coasts in its anger, and thus makes the earth tremble; according to others, it is a subterranean monster, whose head is in

¹ Just before going to press the following news reaches us from Tôkio:—"We had on the 22nd of February this year (1880) at 1 a.m. the most violent earthquake that I have experienced during my fifteen years stay in this country. I was sleeping in the upper story of my Japanese house. I was suddenly aroused and fancied myself on a ship in a storm, the house so shook with me from side to side. Even the sensation of sea-sickness was present. I could scarcely keep upon my feet, and my effort to reach the stairs leading to the lower story only succeeded when the main disturbance was over. Of three shocks which were observed at the Meteorological Observatory, the longest lasted 1½ minutes. People who were awake at the time of the disturbance fancy they heard a dull subterranean rolling.

In Yokohama the disturbance appears to have taken a much more violent form, for here it partly carried away the tile-covering of the roofs, threw down walls and numerous chimney-stacks, so that the damage to the houses of the foreign colony alone is estimated at over \$20,000."

E. S.

the north of Hondo, while the tail lies between the two chief towns, which produces the earthquakes. This position of the monster was assumed, because experience has taught that earthquakes in northern Japan are rarer and less violent than in the middle portion of Hondo, in which widespread devastation was repeatedly caused by them. According to Kaempfer the Gô-to Islands are free from these phenomena. How far this is so I could not satisfactorily ascertain.

In the journals of the Asiatic Society and of the Deutsche Gesellschaft in Japan, Brunton and Naumann have collected lists from Japanese sources of all the earthquakes in the country of which we have reliable information. We extract from them the following details of a number of the most destructive disturbances, which are there enumerated :—

On the 11th of the 10th month, 685 one of the most terrible disturbances took place. Mountains toppled over; the waters of the rivers overflowed the land; public buildings, farmhouses, and temples fell down; and thousands of men and animals found a sudden death. The baths in the province of Idzu were destroyed. A sudden submersion took place in the province of Tosa. An area of five million tsubo (1653 ha) sank instantaneously into the bosom of the waters. In the following year also an earthquake did great damage. This time, it is said, the shocks came from the west.

In the 5th month of the year 844 a disturbance produced great havoc in the province of Higo, especially in the districts of Amakusa, Yazushiro, and Ashinokita. Many public buildings and rice-fields, in an area of 29,000 tsubo (96 ha), were destroyed. Over 570 villages disappeared from the ground, and 1,500 men lost their lives. Mountain-slips occurred in 280 places, and 40 men were buried beneath the ruins.

In the year 745 the ground rocked from the 27th of the 4th month for two days and three nights without interruption. The oscillations in the province of Mino were of such a violent nature that lofty buildings, warehouses, temples, and houses fell in multitudes.

On the 14th of the 8th month in the year 797 there was a great earthquake accompanied by a storm in Kiôto. Whole rows of streets fell down; all the houses and temples fell into ruins; the town was completely annihilated.

In the 7th month of the year 818 a mighty earthquake visited the provinces of Sagami, Musashi, Shimosa, Hitachi, Kotsuke, and Shimotsuke. The number of people who lost their lives was so great that the government had to provide for their burial.

On the 12th of the 7th month of 827 there was a great earthquake, and many houses fell in. In one day were felt one great shock and seven only lesser shocks. On the 14th the oscillation still continued, and at ten o'clock on this day a terribly violent

shock was felt, at each shock was heard a thunderous subterranean roar. A great number of further disturbances followed in this and the succeeding month. In the year 830 violent earthquakes occurred in Akita. On the 13th of the 2nd month of 841 a great earthquake took place at Shinano. In one evening ninety-four shocks were counted. Many thousands of buildings were destroyed.

Violent earthquakes, in the years 850, 856, 857, 864, 868, destroyed portions of Kiôto, and caused more or less injury in the surrounding provinces.

In the year 877 all the provinces of Kuwantô were visited by earthquakes, which caused most devastation in Sagami and Musashi.

Thus the reports proceed; and Kiôto appears to have fallen with especial frequency in the sphere of the most violent disturbances.

This collection of instances in Naumann shows sufficiently how unfounded is Brunton's view, that the frequency of violent, destructive disturbances has increased in modern times. We frequently hear also of sea-floods that rushed irresistibly over towns and villages, and made their way even to places far removed from the sea. Such an earthquake flood appeared, *e.g.* in the summer of 869, in northern Ôshiu, and destroyed over 1,000 persons.

We can only mention here a few more of the most fatal disturbances in this and the previous century. According to Kaempfer, in 1703, an earthquake, and the accompanying conflagration, destroyed almost the whole of Yedo. The disturbance, according to other accounts, took place on the 30th December, at 2 a.m. In Odawara whole rows of houses were thrown down by it; thousands of people perished. Those who sought refuge in the neighbourhood of the sea were swallowed up by the raging flood. In the evening of the 1st January it rained heavily, and the disturbances only ceased on the morning of the next day. This earthquake must have cost the lives of nearly 200,000 people, for in Sagami alone perished 100,000 people, in Yedo 37,000. Four years later the last great eruption of Fuji-no-yama was accompanied by violent earthquakes in the same district.

Next follows the report of a considerable earthquake which happened in 1726, in Echizen.

The province of Echigo, the town of Kiôto, and other parts of the country, were seriously affected by earth-shocks, in March 1751. In Echigo 16,000 people lost their lives thereby.

In 1782, Kuwantô was, in August, twice visited by powerful earthquakes, and there followed on the 10th of September, in Yedo Bay (probably in consequence of an earthquake in a southern district), a flood which, beside other injury, swept over the urban districts of Fukagawa and Honjô and did much damage.

The last serious outburst of Asama-yama in the next year, 1783,

was also followed by widespreading violent earthquakes; and the last eruption of Onzenga-take in Shimabara, in 1792, produced an unusual disturbance through the district.

Dewa was in the summer of 1804 the theatre of frequently repeated violent disturbances, which did much damage and also caused great loss of life. In March, 1822, in Ōshiu and over Yedo within three days 150 more or less violent shocks were felt.

On the 18th December, 1828, an earthquake spread its terrors over Echigo. Over 30,000 people, and 6,000 of the larger domestic animals perished.

Two years later, on 18th August, Kiôto became again the chief theatre of devastation by a similar phenomenon. The Tokugawa palace, Nijô, many houses and warehouses fell down, and innumerable people were killed. With a roar like thunder the earthquake took place towards four in the afternoon. At first people were only astonished; but soon the houses rocked like waves, and the crash of the falling buildings sounded like a thousand thunderstorms. Fortunately, after three mighty shocks had quickly succeeded each other, it was somewhat quieter. At this moment every one fled into the streets, where people of the most different classes camped side by side. Most of the houses in Kiôto fell in, only a few were merely damaged, none escaped altogether. By the fall of the *godowns*,¹ not one of which was undamaged, a vast number of people were injured. There was no one who thought of working or proposed to clear away the ruins. Every one appealed to the gods for protection and salvation. The strength of the shocks soon grew less, but they were repeated from time to time, so that to the 19th August over 120 shocks were counted. Then there were about three or four disturbances every hour; about four in the afternoon there came a very violent shock. The inhabitants, tormented by anxiety and exposed to the rain and dew, spread straw over the narrow streets; on this they laid bamboo poles, straw-mats, and cloaks, in order to pass the night again in the open air. There were also many people who sought refuge in the mountains, and some open and distant squares. The disturbances continued also on the 20th August, though only two to three occurred every hour. Again on this night everybody slept in the open air, except a few careful people who were afraid of catching cold. The earthquakes had not yet ceased at the end of the month, though the number of shocks had fallen to fifteen to twenty a day. On the 2nd and 3rd September heavy rain set in, and on the latter day the sea rose, rushed over the country and made its way to Kiôto.² Many people thus lost their lives. It was only a month later that the earthquake entirely ceased.

¹ Fireproof, whitewashed buildings, which are specially used by the tradespeople as storerooms, and stand away from the wooden dwellings and the streets. The Japanese call them *dozô*, or *kura*.

² This must mean that the river was dammed as far as this.

On the 21st July, 1835, a great earthquake occurred in the provinces of Rikuzen and Rikuchiu, the palace of Sendai was entirely destroyed, and 400-500 houses were carried by the hurrying earthquake wave into the sea, so that many lives were lost.

In the province of Shinano there raged, on the 8th May, 1847, between eight and ten in the evening, an unusually violent earthquake. Mountains and houses fell, springs disappeared and others broke forth, rivers changed their course, and flooded wide tracts. Everywhere were visible traces of terrible devastation, especially in the basin of the Chikuma-gawa. Neighbouring provinces were also more or less affected.

During the year 1854 the earth was hardly ever quiet. The most violent and destructive disturbances, however, took place on 8th July, and especially on 4th November. The latter was accompanied by a sea-flood, and extended over nearly the whole country, but with particular violence over the south side of Hondo, Shikoku, and Kiushiu. Kuwantô was less affected by it, but from all the other southern provinces, Tôkaidô, Nakasendô, Gokinai, Sanyodô, Kiushiu and Shikoku, we have a mass of reports, which show that on the one hand the downfall of buildings, and the fires which resulted on the other, and in particular the inundation of the sea, carried on their destructive work in hundreds of places. The seaport of Shimoda was inundated on this occasion, and a Russian frigate foundered.

The last great earthquake in the capital, Tôkio, was that of 1855. Its horrors still live in the recollection of the people, and they fear nothing more than a repetition of the occurrence. Altogether eighty shocks were felt within a month, the most violent of them on the night of 10th November. Yedo was speedily turned into a rubbish heap, and fire broke out simultaneously in thirty different places. It was as light as by day, and the black clouds of smoke covered the whole sky. Those of the inhabitants who had not previously thought of saving themselves, mostly perished under beams and ruins; others fell a prey to the flames. The survivors had taken refuge in the streets. The disturbances continued almost uninterruptedly until the 11th November. From time to time the shocks were repeated, but were continually weaker, until the end of this earthquake arrived on the 28th November. The number of fallen houses in Yedo was 14,241, of fallen warehouses 1,649. But this refers only to the town proper, not to the dwellings of the Daimio and Samurai. 104,000 people are said to have perished.¹

¹ The number of deaths, etc., is doubtless grossly exaggerated. In fact Japanese figures of this period, and especially when relating to public calamities, are purely romantic. In the "Ansei Koreri Riukoki," an account of the cholera epidemic of 1858, and a serial continuation of the narrative of the earthquake referred to, the number of people officially reported as recipients of the Government dole in Yedo, was eight-and-a-half millions. The present population of Yedo is about a tenth of this, and can never have been more than two millions.

Very striking in proportion to the violence of the earthquake was its very limited area. On Nakasendô, it was felt only as far as Takasaki; on Koshiukaidô, as far as Hachioji; on Tôkaidô, as far as Hodogaya; on Ôshiukaidô, as far as Utsunomiya; in Shimosa as far as Sakasai. The plain of Kuwantô was the hearth and Tôkiô the centre of this earthquake.

During the five years of meteorological observations, from December 1872 to December 1877, Knipping observed at Tôkiô eighty-six earthquakes. His careful observations upon them, together with graphic comparisons of them from the most various points of view, appear in the fourteenth part of the *Mittheilungen der Deutschen Gesellschaft*. Except, however, that the disturbances were generally more frequent by night than by day, and more numerous and more violent in 1877 than in the preceding years, no general rules can be deduced from them; just as Naumann also, in his very careful and laborious comparison, could reach no general results.

IV. SÆCULAR MOVEMENTS.

That the Japanese coasts are in general slowly rising, has long been conjectured. This was inferred from reports of phenomena of more sudden upheavals here and there in connection with volcanic eruptions and earthquakes, from the occurrence of late tertiary marine strata in several bays, such as that of Yedo, and from analogy with other islands and coasts in the north of the Pacific. Thus, for instance, F. Schmidt had made Saghalien the subject of a thorough geological and botanical inquiry, in the course of which he found subfossil beds of molluscs imbedded in their natural position in clay, and rightly interpreted this fact as a sign of the still continuing elevation of this island. Similar, and at least as trustworthy, evidences of a gradual, so-called sæcular elevation of the east coast of Hondo were adduced by me for the coast of Nambu and recently by Naumann for the plain of Kuwantô. In the physical world no evidence is stronger than that of observed facts; and the fact that the coast of Nambu has been distinctly elevated in very recent times is all the more remarkable as being taken from a non-volcanic district. The state of things is as follows:—

About midway in the coast between Sendai Bay and the harbour of Kamaishi lies in lat. $38^{\circ} 50'$ Kamamaye-ura (Kamamaë Bay). It runs about from three to four miles in depth and half as wide in a north-easterly direction into the land and has the island of Ôshima running across its broad outlet, so that only narrow channels are left at its sides. In the background of this bay lies the clean little town of Kisenuma with a safe deep harbour. The formerly very active shipping trade has according to the account of the Kôchô (Mayor) become constantly less important during the last thirty years, and that in consequence of the shallowing of the entrances

on each side of Ōshima. One naturally thinks that they may have been sanded up; but this explanation is here inadmissible, for neither does any river run in here by which it could be caused, nor are the current and movement of the waves along the coast of such a kind as to produce it.

A couple of miles from Kisenuma lies on the northernmost inlet of the bay the little place Shishiori, whose inhabitants collect sea-salt on the level beach. A newly constructed road leads from Kisenuma along the margin of the bay and lies about half a metre above high-water mark. Soon after leaving Kisenuma it bends round a steeply falling limestone wall, which is traversed by narrow veins of calcareous spar and, like the schist formation around, is undoubtedly of palæozoic origin. Now on this wall directly over the road, we observe a horizontal band about eighty centimetres broad, in which the limestone is coarsely perforated like a sponge. *Lithophaga*, the widely-spread *Saxicava rugosa*, and in particular the *Petricola japonica* Dunker (sp. n.), whose well-preserved shells may still be observed in many of the holes, present as clear a testimony to the most recent history of this coast as the *Modiola lithophaga* in the columns of the temple of Serapis at Puzzuoli. The elevation which the coast of Kamaye-ura has undergone in very recent times must be estimated as at least 1·5 metres. Doubtless the shallowing of the entrance near Ōshima is very intimately connected with it and thus finds its natural explanation.

In his study of the plain of Yedo,¹ Naumann has adduced certain proofs of its recent elevation, and indeed of the whole plain of Kuwantō. He has drawn attention to the fact that maps from the first half of the 11th century make Yedo Bay run much further to the north; the mouth of the Sumida lay further back, and the soil of the whole lower town of the present Tōkiō was under water. Even in the middle of the 16th century the sea completely covered both parts of the town on the left of the river, namely, Fuka-gawa and Honjō. There was accordingly a time when the now so thickly populated district of Asakusa lay in the sea, and the *Porphyra vulgaris* Ag., which only flourishes in salt water, grew in its immediate neighbourhood. Hence, its name Asakusa-nori, seaweed of Asakusa, which first drew Naumann's attention to these interesting facts.

Naumann shows that the retiring of the sea cannot be ascribed only to the carrying of sediment by the river, and therefore not simply to the formation of a delta, but that sæcular elevation must also be taken into account. Formerly Yedo Bay stretched further over the whole level country of Shimosa and Hitachi, and northwards as far as the plain of Kuwantō extends. The mountain country of Kadsusa-Awa emerged from it as an island, and a current

¹ Petermann's Mittheilungen, 1879, p. 121.

(whether that of Kuro-shiwo, as Naumann supposes, or not, does not matter) ran in a north-easterly direction between this island and the northern mountain margin of the present plain towards the north-east into the open ocean. To it Naumann ascribes the carrying of the pumice-stone. Its occurrence in the trachyte tufa of the hills bordering the plain on the south is thus explained. Sæcular movement and the deposition of silt caused a gradual elevation of the sea-bottom and a retiring of the sea. In favour of the latter many other facts speak in the lower course of the true eastern Tone. Besides the geological formation of the soil, historical accounts and names in the interior, which otherwise are only intelligible and usual in the case of coast-places, point to a retreat of the sea. The flat lakes on both sides of the lower Tone-gawa were probably first thus formed as lagoons or coast-lakes, and then quite gradually retired inland.

Moreover, in Shikoku and many other parts of Japan, there is much that points to the sæcular elevation of the coasts. As, however, we have no detailed examination of them, and particular phenomena might be otherwise explicable we may here rest content with the foregoing illustrations.

IV.

OROGRAPHY.

A. GENERAL CONFORMATION OF THE GROUND.

THE Japanese Empire is a mountain country, in which the level, cultivated ground, including the artificial terraces, forms barely 12 per cent., or not an eighth of the entire area, in which moreover the less cultivable or incultivable appurtenant lands, such as Yezo and the Kuriles, are altogether left out of account. As a rule, hill and valley continually succeed each other, and the few plains of any importance extend about the lower courses of the great rivers. To these belong: the plain of Kuwantô, north of Yedo Bay, on the Tone and Sumida; the plains of Mino, Owari, and Ise on the Kiso and Ise-no-umi; the plain of Osaka, on the Yodo; the plain of Echigo, on the Shinano; the plain of Sendai, on the Abukuma and the Bay of Sendai; the plain of Ishikari in Yezo. Only Northern Hondo has also in the interior some hill-enclosed fertile levels of considerable extent, namely, Aidzu-taira, near Wakumatsu; and further north the plain of Yonezawa, as well as the much larger plain of Yamagata.

In general the Japanese mountains follow the longer extension of the islands from N.E. to S.W., and combine tolerably lofty summits with comparatively low passes. This is due principally to the facts that the mountain masses of primitive crystalline rocks and old schists for the most part do not rise very high, while the volcanic formations which have frequently burst through and overlain them form indeed pretty lofty summits, but not often long and high ridges, so that frequently the passes between them lead over the old foundation. Not unfrequently also volcanic mountain masses are found lying along the mountain chains and forming connections between the often distorted and confused members of the older mountains.

Rounded mountain forms considerably predominate.¹ The mountain landscapes of Japan are distinguished, not so much by magnificent, wild, shattered, and disrupted masses of rock, as by

¹ The pictures in Siebold's Archiv are fancy pictures, which in their boldness have not the slightest similarity to the mountains they are supposed to represent.

their charm and freshness. Besides the constitution of the materials from which they are constructed, this character is chiefly due to the great decomposition which is here promoted by many factors, and effects a comparatively rapid modification of the outlines. All those influences, in fact, which are denoted as the tooth of time exert themselves in a high degree—in winter frequent interchange of rain and drought, frost and dew; in summer, on the other hand, violent and abundant rainfalls which, in combination with the high temperature, powerfully stimulate vegetation, the roots of which are, further, a not inconsiderable agent in breaking up and decomposing the rocks and their débris.

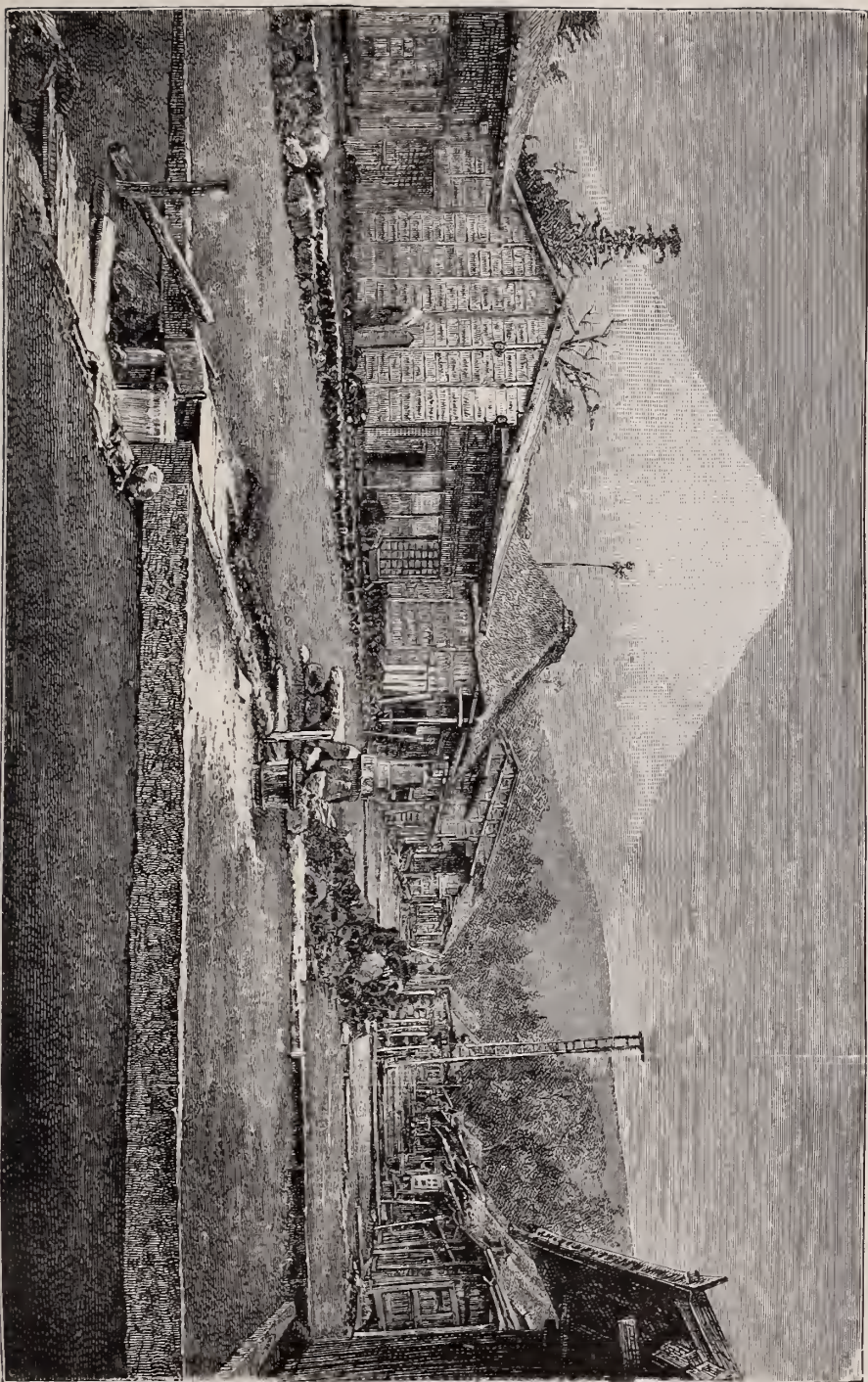
Eternal snow and glaciers are not found in the empire of the rising sun; but many of the lofty summits on Hondo and Yezo exhibit until late in the autumn considerable fields of snow, and as early as the beginning of October are clad afresh in white raiment. Moreover, in the case of several mountains as, *e.g.* Haku-san and Iide-san,¹ it not unfrequently happens that individual strips of snow remain without interruption for several years. This is indicated in such names as Yuki-yama (snow mountain). Haku-san or Shiro-yama (white mountain), and in the case of Iide-san a common phrase in Aidzu and Yonezawa, namely, “wait till ‘Iide-san no yuki-wa kigetara’ (the snow of Ede-san is melted away)” *i.e.* postpone a thing *ad calendas Græcas*.

We cannot, however,—and still less perhaps in Japan than elsewhere,—from the lingering of the snow upon a mountain draw any conclusions as to its relative height, since this fact depends upon various circumstances, and above all, upon the quantity of snowfall during the winter.

The Japanese denote and distinguish by special names the particular mountains in their country, but not the mountain chains. Polytheistic Buddhism, and also the worship of ancestors, provide them with a particular god for every remarkable peak. They undertook the more cheerfully the tasks that would give pleasure to the god, of finding out his dwelling-place, of erecting there a temple in his honour, and of praying to him there, as they thus attained the certainty that the being thus revered would thenceforth be gracious to them, and would help them through the troubles and burdens of life; and eager priests gave and still give them this assurance in writing in exchange for gold. Such pilgrimages moreover suited the natural inclination of the Japanese people to contemplate the beauties of nature, for which they possess, as is well known, a high degree of appreciation and sensibility.

Thus many of the loftiest mountains became familiar to the people, and on the opening of the country were also easily acces-

¹ The people say Ede-san always, instead of Iide-san.



SUBASHIRI, AT THE FOOT OF FUJI-NO-YAMA.

sible to foreigners. The chief amongst them are the following :—Fuji-no-yama (Fuji-san) in Suruga, On-take (Mi-take) in Shinano, likewise Asama-yama; Tate-yama (Riú-san) in Echii, Haku-san (Shiro-yama) in Kaga, Omine in Yamato, Koya-san in Kii, Tsukuba-san in Hitachi, Nikkô-san (Nan-tai-san or Futara-san) in Shimotsuke, Bantai-san in Iwashiro, Tsuki-yama (Gas-san) in Uzen, Chôkai-san (Tori-umi-yama) in Ugo, Iwaki-yama (Iwaki-san) in Mutsu, Ganju-san (Iwawashi-yama) and Haya-chine-san in Rikuchiu, Hiye-san in Omi; further in the island of Kiushiu: Kirishima-yama in Hiuga, Asô-yama in Higo, Onsen-ga-take in Hizen.

These are almost exclusively volcanic peaks, many of which rise freely, and in the form of a cone, from the plain, or tower above the surrounding hills, and must therefore have appeared especially imposing to the people. But the most imposing figure amongst their holy mountains is that of Fuji-san, or Fuji-no-yama, the highest mountain in the country. Accordingly it is to this in particular that pilgrims direct their steps, and, by four ways, ascend it every year to the number of 15,000 to 20,000; therefore also it is the landmark, and the most popular mountain in the country, which we find figured steeper than the original thousands of times upon the most various products of Japanese art and industry, painted upon paper, fabrics, lacquer, and earthenware, or carved with great skill in relief upon wood or on cast and chased vases of bronze.

On the borders of the provinces of Suruga and Kai, 60 miles (96·47 km.) in a straight line, we perceive it from Tôkio, which has a view of it from several of its streets. Fuji-san rises on a broad base to a height of 3,745 metres, isolated into the air as a volcano quiescent since the last eruption of 1707; and the old fable represents it to have been formed in one night, together with the Biwa lake, of whose bottom the gods constructed it.

From Fuji in clear weather one overlooks a considerable tract of the broadest and highest part of the island of Hondo and of the whole country. Great masses of mountain, from 2,500 to 3,000 metres high, rise in various directions and at various distances from Fuji, and exhibit here steeply ascending granite walls, there rounded volcanic domes or shattered peaks.

B. MOUNTAINS OF THE ISLAND HONDO.

The chief mountain range is, generally speaking, formed by the watershed between the Pacific and the Japanese Sea, and stretches to some extent like a backbone through the whole length of the island from the Straits of Tsugaru to the narrows near Shimonoseki, forming in the north the natural boundary between Mutsu and Dewa, in the south between Sanin-dô and Sanyo-dô, at the same time sending out branches which have been employed as natural

boundaries between the several provinces of these districts. There is much more complexity towards the middle of the island, where, in part sideways from the great watershed, there rise much greater chains whose limits it is more difficult to determine.

On the Straits of Tsugaru, beginning east of the harbour of Awomori, the watershed above-mentioned, approaching at first more to the west coast and later towards the east coast, runs along its whole length, and as far as the centre of the chain in Adzuma-yama to the west of the town of Fukushima, forms the boundary between Mutsu and Dewa. Further south the central range divides the Abukuma-gawa from Lake Inawashiro and Aidzu-kawa, about as far as Sannô-tôge. From here the watershed of the two seas runs along great mountain chains, which embrace from Tôkio in a bend with a radius of from 60 to 70 miles a considerable portion of the plain of Kuwantô and form its northern and western boundaries. Near Kinpo-zan, famous for its rock crystals, 72 miles to the west of Tôkio, on the boundary of Shinano and Kai a division of the range takes place. An unimportant chain continues the old southerly direction and at the same time the western boundary of Kuwantô further southwards and ends in the peninsula of Idzu; the much more important chain on the contrary turns south-west, forms the boundary between Tôkai-dô and Tôsan-dô, runs finally to Yamato and Kii, and ends at the Linschoten Straits.

The watershed between the Pacific and Japanese Sea follows this chain only for its earlier portion as far as the eight summits of Yatsuga-take, then turns by Wata- and Shiwojiri-tôge between Suwa-ko on the one side and the Shinano river on the other, in a westerly direction to the Japanese Snow Mountains between Shinano and Hida, yet does not follow them but cuts across Hida as far as Haku-san on the boundary of Hida, Echizen, and Kaga. From here the watershed in a south-westerly direction forms the boundary between Mino and Omi on one side, Echizen and Wakasa on the other, and runs then, as was mentioned above, between the two western departments of Chiugoku right to the Shimonoseki Straits. From Haku-san towards the south-west no mountain occurs either in this watershed or beside it that still bears snow in the height of summer, for the elevation is nowhere again so considerable as further to the north, and hardly ever reaches 1,500 metres. The eastern boundary of Hokuokudô also runs in its more northerly extension along a considerable mountain chain with many lofty summits. Also further towards the north, in Dewa, is this traceable, and only in Akita finally unites itself with the central chain. Considerable connecting links run from these mountains on the eastern border of Hokuokudô to the main chain, and form the boundaries of the several provinces of Tôsan-dô.

Lastly, we must mention as a third parallel range to the east

of Kitakami the Northern Schist Range, which runs parallel to the coast of Mutsu as far as to Sendai Bay.

I. MOUNTAINS OF OSHIU AND DEWA.

In Northern Hondo, as has been observed, a continuous mountain chain from Cape Natsudomari (north-east of Awomori) to the centre of the range Adzuma-yama, on the boundary of Iwashiro, Uzen, and Iwaki forms the watershed between the Pacific and the Japanese sea—Ôshiu and Dewa. Its summits, chiefly volcanic cones on older mountains, rise from 1,200–2,000 metres high, but have not yet been examined in detail, while the passes lie between 600 and 1,000 metres high, as Kunimi-tôge on the way from Akita to Morioka from the valley of the Toshima-gawa up the Katsugawa to the Kitakami; Akita-miyagi-tôge from Akita up the Ommono-gawa past Jacobori to Sendai, Itaya-tôge from Yonezawa to Fukushima. Among the loftiest summits of the chain we find Shiranegin-san at the bend of the Noshiro-gawa, Numa-yama, Biobuga-take, Nakano-yama, and Sensiuga-take, due west of Ganju-san, Morioshi-san, Komaga-take (on the north side of Kunimi-tôge), Ôsarasawa-yama, Sugame-yama, north-east of Shinjo, Sennen-san, east of Yamagata, Yoshiga-take Zooga-take, and Adzuma-yama. Much more imposing, however, and partly also higher, are those more isolated volcanic peaks which rise on both sides of the central chain and partly are only loosely connected with it, and of which three, viz., Chôkai-san, Ganju-san, and Iwaki-san, pass as the highest mountains in North Japan, because they receive their snow-caps earlier than the others, and wear them longer. Chôkai-san is certainly the mightiest of them. It bears also the names Toriumi-yama and Akita-fuji, rises 3 ri (7 miles) to the south of the town of Honjô from the Japanese Sea as a mighty, commanding cone, on a broad base, some 2,400 metres high. Four ri (10 miles) to the north-west of Morioka, rises Nambu-fuji. It is usually called Ganju-san, or Iwawashi-san; also Iwawashi-yama, and Iwade-san. On the west side of the Kitakami it rises steeply to about 2,000 metres, and is connected towards the west with the central chain. At the east of it, on the left bank of the river, is described the much lower volcanic cone Himegami-yama; and also to the south of Morioka, and west of the Kitakami-gawa, a series of volcanic mountains lie along the central mountain-range among them several called Komaga-take. In the same way we find on the west side of the range, about Lake Takogata, bare volcanic peaks, as a continuation of which may be regarded Taihei-san, rising in the background of the plain of Akita. At the northern end of Rikuchiu, where Lake Towada spreads its expanse of water in woodland solitude, a branch strikes out from the central range and forms towards the west the watershed between Noshiro and Hirosaki, and also the boundary between Ugo and Mutsu.

In the north-west of this latter range rises Tsugaru-fuji, or Iwaki-san, as it is more properly called, to a height of from 1,500 to 1,800 metres. The two peninsulas also, which embrace the Awomori bay on the west and east, bear some isolated volcanic peaks, among which we may mention, on the east side, Yake-yama, about 1,000 metres high; and, further north, Oma-take. If we finally cast another glance at the country to the east of the Kitakami, where volcanic formations only appear sporadically, we observe to the south of the town of Hachinôhe, near the Pacific, a considerable mountain called Toyahega-take. In the Northern Schist Range, which forms the watershed between the Kitakami and numerous coast-streams, towers, as the highest summit to the south-east of Morioka, Hayachine-san, to a height of 1,500-1,800 metres. Long, and for the most part rounded, hill spurs of 300-400 metres in height run from these mountains eastwards to the sea, to which they fall down steeply, though from no great height. A rounded hill-country, covered with brushwood, forms in the southern portion of the Kitakami, on the borders of Sendai and Nambu, the transition from these schist mountains to the central chain, in which Komagatake and Sugane, to the west of the little town of Ichinoseki, are here the conspicuous elevations.

Opposite, on the Japanese Sea, the Mogami-gawa runs into the sea near Sakata, in southern Dewa. Of the three plains which it waters, those of Yonezawa, Yama-gata, and Shônai, the latter is closed in on the south by some noteworthy volcanic peaks, among which may be specially noted Gas-san (Tsuki-yama), or Moon Mountain, which we find in the south of Chôkai-san. To the south-east rises Haguro-san, and to the south-west Yudono-san. A festival is celebrated every year towards the end of September in honour of the gods of these mountains and of Chôkai-san, in Tsurugaoka (Shônai).

II. THE BORDER MOUNTAINS OF AIDZU-TAIRA.

From Adzuma-yama as far as Yamizo-yama, where Shimotsuke, Iwashiro, and Iwaki meet each other, the southern direction of the central mountains and of the great watershed is continued, which separates the basin of the Abukuma from that of Lake Inawashiro, and thus forms the eastern limit of that broad, fertile valley, which is known as Aidzu-taira. Towards the south it is bounded by that continuation of the great watershed which here separates the Naka and Tone, together with several of their tributaries, from the streams of Aidzu. The ridge of the mountains runs first towards the south-west as far as Nasu-yama, then by way of Sannô-tôge and Araumiga-take as far as Akayasu-yama, then westward to Komagatake, where Iwashiro, Echigo, and Kotsuke meet. The western boundary of Aidzu-taira runs from Komagatake as far as Iide-yama, in Echigo. It is a portion of that lofty range which

forms the natural boundary along the whole eastern length of this province, gives its northern direction to the Tadami-gawa, and finally allows to the waters of Aidzu, in the Agano-gawa, a narrow passage to the sea. The further side, the north of the Aidzu plain, exhibits a mountain-ridge, which connects Adzuma-yama with Iide-san, and forms the watershed towards the Mogami-gawa and Arakawa.

Thus the richly-watered, fertile plain of Aidzu is enclosed by a mountain frame, the corners of which are called Iide-san, Komagatake, Akayasu-yama, Yamizo-yama, and Adzuma-yama, and between which many another less-known summit attains a considerable height. The highest, however, seems to be Iide-san (about 2,500 metres), which is permanently covered in snow earlier than all the others, namely, from the beginning of October. Besides it and the two Komaga-takes, Kimen-san and Otoriga-take are the conspicuous heights in the western chain. On the south side, west of Akayasu-yama, rises Hiyu-ziga-take (Fire-stone Mountain), at whose foot, in Ose-numa, the Tadami-gawa has its source to the east of Yokkati-yama, Kurowa-yama, and a number of other important summits, which, extending northwards, separate the basin of the Tadami from that of the Okawa. The volcano, Nasu-yama, is 1,912 metres high; Yamizo-yama only 990. The highest mountain, which is close to the Aidzu-taira, and is therefore most imposing, is Bandai-san, a volcanic cone, which rises on the north side of Lake Inawashiro to a height of 1,850 metres, and is visible at a great distance.

The most important passes which lead across the mountains just mentioned to the Aidzu-taira and its chief town, Wakamatsu, are: in the south—Sannô-tôge (936 metres), from the valley of the Kinu-gawa; in the south-east, Itabashi-tôge (760 m.), and Ando-tôge (1,050 m.), from the upper valley of the Abukuma (starting from the town of Shirakawa); in the east, Katanari-tôge, as well as Takigawa-tôge (533 m.), from Nihonmatsu on the middle Abukuma and Tsuchi-no-yu-tôge (1,200 m.), from Fukushima to Lake Inawashiro and to Wakamatsu; in the north, Kaya-tôge (909 m.), from the valley of the Mogami (from the town of Yonezawa); in the north-west, Tabanematsu-tôge (442 m.), on the way from Niigata up the Agano-gawa (Tsu-gawa).

III. THE BORDER MOUNTAINS IN THE EAST OF ECHIGO.

If on a clear November day we view from the dunes near Niigata this range running parallel to the central elevation of Hondo, and accordingly running also from N.E. to S.W., we descry at an angle of about 60° towards the north-east a series of snow-covered peaks, the border mountains of Uzen, then a depression in the outline (where the Arakawa makes its way through), next due eastward the long white ridge of Iide-san, ex-

tending some twenty degrees of the horizon and covered in snow. Then follow towards the south-east spots free from snow and lofty snow-covered peaks in alternation. Amongst the latter Kimen-san and Gin-san are specially conspicuous, also due southward we descry many a considerable height. The section from Iide-san to Komagatake has been already briefly mentioned as the western boundary of Aidzu-taira, but not its northern and southern continuations. As to the former, the road which leads from Yonezawa to the left bank of the Arakawa, although it keeps in the hollow of the mountains, has nevertheless to cross a whole series of heights, of which four or five are considerable. To the north of the river, however, and eastward of the town of Murakami, the mountains soon rise again in summits of 1,500 to 2,000 metres, among which Asahiga-take, Miomote-yama and Daiiri-yama are observed at a great distance. Still further towards the north, the mountains fall to the sea on the boundary of Echigo, and form here a not lofty but precipitous coast of basaltic lava, while more inland, in the wooded hill districts, granite also frequently occurs. A hill ridge forms the connecting link with the volcanic cones of Shônai.

As a southern continuation of the western marginal range of Aidzu-taira we must regard the section from Komagatake past Mikuni-yama and Okura-yama to Jotoke-san and Shirane-san, not merely because it keeps the same direction, but also essentially the same character. Here, too, above a broad base of crystalline rocks, amongst which diorite and diallage are especially frequent, rise higher volcanic peaks. This circumstance and the abundant rains, and particularly the snowfall in winter, explain the luxuriant vegetation and the beautiful forests, which we find in this great district between Echigo and Tôsandô. The range separates the Nakatsu and other tributaries of the Shinano-gawa from the Wagatsuna-gawa and Tone, and is accordingly a member of the great Oceanic watershed, which we have traced hither from the Tsugaru Straits. Mikuni-yama may be considered the connecting point where Shinano, Echigo and Kotsuke meet, and the "Three-lands Pass" forms one of the most remarkable mountain passes in all Japan. Over Mikuni-tôge runs the road from Tôkio-Takasaka to Nagaoka-Niigata. It continues in the mountains for 17 ri ($41\frac{1}{2}$ miles), rises in Kubo-tôge to 860 metres, in Mikuni-tôge to 1,323 metres, and in Futaye-tôge to 953 metres high, while the highest place on it, Asakai, has an elevation of 961 metres. From Jotoke-san another range runs northwards between Nakatsu and the Chikuma-gawa to the border of Echigo, along which other mountains form the connection with Mikuni-yama.

IV. THE MOUNTAINS OF KUWANTÔ.

The mountain chains which we have treated of as the south-east and southern boundaries of Aidzu-taira, and as the southern continuation of its western margin, belong indeed, as they separate

Iwashiro and Echigo from Shimotsuke and Kotsuke, with reference to the two latter provinces also to Kuwantô, but the sides looking towards Kuwantô were not considered in detail. Yet here there are disposed several remarkable volcanic mountain chains and mountain-masses, which we will now more particularly describe in connection with various others. At the head of them stand the volcanic mountains of Nikkô. About 36 ri (88 English miles) northwards from Tôkiô this most interesting district of Japan rises at the north-west corner of Shimotsuke, leaning against the mountain-centre, Akayasu-yama, and the watershed which runs from it, north-easterly towards Sannô-tôge. The entire district which is here specially in view, does not include many square miles and is washed by the Daiya-gawa, a right-hand tributary of the Kinu-gawa, which comes from the Sannô-tôge. As its centre and second highest summit must be considered Nantai-san (Futaara-san), which rises steeply on the north-eastern side of Lake Chiuzenji, and is wooded to the peak. It is also called Nikkô-san, belongs to the sacred mountains of the country, and formerly was only ascended from the lake and a temple there, after strenuous penitential exercises, during one week of July. Where it flows out of the lake, the Daiya-gawa forms the lofty and celebrated waterfall Kegon-no-taki, and lower down several rapids. Its sources are near the watering-place of Yumoto at the foot of Shirane-yama.

Besides magnificent mountain forms, wild ravines, and wall-like precipitous cliffs, we find here a great abundance of water, at one time in the form of clear deep mountain lakes of solemn stillness; at another in charming falls or as murmuring streams deep buried in some shady forest gorge. At the same time there is an exceedingly luxuriant and manifold vegetation to interest and delight us. Art has allied itself with nature to make Nikkô the district of Japan that is best worth seeing. Where the Daiya-gawa rushes over the last rocks of rhyolite near Hachiishi, a temple grove rises to the left in which are the tombs of the two most powerful Tokugawa-Shôgun, Iyeyasu, and his grandson Iyemitsu. The whole country has vied in honouring these founders of the most powerful dynasty of Shôguns, and in tastefully adorning their resting-places. With justice says the Japanese proverb: "Nikkô minai uchi-wa kekko-to iuna" (He who has not seen Nikkô must not talk of the beautiful).

But, still more than by temple-splendour, lanterns of bronze and stone, and other glories of this sacred grove, are we fascinated by the splendid Cryptomerias and Retinisporas, particularly in that incomparably beautiful and magnificent avenue, which leads from the bank of the Tone at a distance of 18 ri (44 miles), past Utsunomiya as far as Imaichi, and whose trees become ever more stately as we approach the goal.

The following are some of the measured heights in the district of Nikkô-san: Shirane-yama 2,618 metres, Nantai-san 2,540 metres, Akanagi-san 2,400 metres, Omanago 2,300 metres, Sulphur-spring

Yumoto 1,531 metres, Chiuzenji Lake 1,340 metres, Kegon-no-taki 1,310 metres, Nikkô (Bridge above Hachiishi) 630 metres.

The mountains of Nikkô sink towards the Daiya-gawa as well as eastwards towards the Kinu-gawa, on whose eastern bank Takahara-yama rises to a height of 1,823 metres. It is, however, not included amongst the mountains of Nikkô.

The west side of the Nikkô mountains bounds a meridian range in which Kotsuki and Shimotsuki meet. It begins in Akayasu-yama and ends in the neighbourhood of the little town Ashikaga, thus advancing far towards the south, into the plain of Kuwantô, about as far as where the Waterashi-gawa, which rises from it and in its upper course pursues eventually the same direction with it, tends eastwards. This mountain range may be called from its most important pass the Ashio mountains. Its highest summits in the north, in which the Shirane-yama, already mentioned, must be included, are all extinct volcanoes, but towards the south the older mountain limbs, crystalline masses, especially granulite and diorite, are found higher than in the mountains near Nikkô. Near Akakura in the Akagane-yama (copper-mountain) an old mine is carried on. Kôshin-san strikes us by its singular masses of rock, and the Jizoga-take (1,811 metres), more to the south, also belongs to the most remarkable heights of this range. Ashio-tôge is 1,343 metres high. This pass, which is crossed on the way from Nikkô to Hanawa and the Nakasen-dô, leads us to infer that the mountain range is of a considerable height. East of it and beyond this chain rises Osaku-san steeply to a height of over 900 metres.

Between Numata and Mayebashi, the Tone-gawa in its course from north to south divides two interesting volcanic mountain masses of slight extent, which are not a little striking with their bare and rounded forms. They are named after their loftiest and most often visited summits, which, of course, are not without their temples, Akagi-san and Haruna-san. The Akagi mountains lie in Seta-gori, between the Tone and Watarase-gawa, south-east of Numata and attain in Okurobo a height of 1,978 metres. The small lake of Akagi lies at a height of 1,439 metres. By the Haruna mountains are understood a series of bare domes, which fall steeply to the plain of the Tone, to the north of Nakasendô, in the north-west of Takasaki. Strictly they are merely the extreme heights of a volcanic hill country, which embraces the whole north-western corner of the province of Kotsuke as far as the boundary of Echigô and Shinano, and is watered by the Agatsuma-gawa and its tributaries. Nothing is known as to the heights of these mountains; but few of the summits appear to exceed 1,500 metres. The rock here, too, probably consists principally of trachyte, which on the left bank of the Agatsuma, on the way from Takasaki to Mikuni-tôge, exhibits extraordinarily fantastic mountain forms, reminding us of the ruins of old castles.

Turning now southwards from Haruna-yama and Nakasendô we

find here also a number of volcanic mountains, distinguished for their ruin-like fantastic rock-formations, amongst which Miogi-san is the most conspicuous. This interesting and richly wooded mountain country is indeed overlooked from Usui-tôge, that lofty western boundary of the Kuwantô plain ; but its limits cannot be discerned. Whether it extends to the eastern margin of Shinano and to Musashi in the south-west ; and whether the material from which these grotesque mountain forms are constructed is trachyte, as further northwards, or doleritic lava, as at Usui-tôge, must be left to further inquiries to determine.

Through this volcanic mountain country of the province of Kotsuke the Kuwantô, with the tributaries of the Tone coming from the right, rise gradually to the border of north-eastern Shinano. This is formed by two mountain ranges and several volcanic connecting links, and also by the great Oceanic watershed, which has an essentially southern direction from Jotoke-san to Kinpo-san.¹ The first mountain-range ends with the volcano Asama-yama. Its axis runs parallel with the Chikuma-gawa, from whose valley it gradually rises, and which it accompanies on the right bank with a decreasing altitude as far as the breach on the borders of Echigo. Shirane-san and Jotoke-san belong also to it. The axis of the range, which comes from Mikuni-tôge runs in here at an acute angle. The mountains seem to consist principally of old schists, and have a considerable height of ridge. The few noteworthy summits are volcanoes, above all Shirane-san, Adzuma-yama, in which the Agatsuma-gawa takes its rise, and Asama-yama. The latter is 2,525 metres high. Amongst the more recent volcanoes of Japan there is hardly one of whose devastating eruptions history has so much to tell, or which has impressed its baleful traces upon the country so far around, as Asama-yama ; amongst the active ones none which appears so imposing even at a distance, and which, in the immediate neighbourhood of the enormous crater, produces so powerful an impression on the mind of the spectator. Its greyish-white ejecta of pumice-stone cover the ground for many miles in different directions. On clear winter days, especially in January and February, the dome-shaped, snow-covered summit, with the clouds continually arising from the crater, is plainly visible from the highest parts of the capital, Tôkiô, towards the north-west, *i.e.* at a distance of 40 ri (98 miles). The last fatal eruption took place in 1783, the last emission of ashes in 1870.

Asama-yama rises from the very axis of the range. With it the boundary of Shinano is pushed further to the east, and leads past some unimportant heights to Usui-tôge. This is one of the most magnificent mountain passes in Japan. It forms at a height of 1,235 metres the threshold from the highlands of Shinano to the

¹ Kinpo-san (Kinpo-zan) is generally called Kimpu-san or Kimbu-sen.

lowlands of Kuwantô ; from the rough interior to the mild and fertile fields, in which the Tokugawa Shôguns acquired their strength.

The second range on the eastern border of Shinano begins near Usui-tôge, and extends from here as far as Kimpu-san, or more accurately to Kobushi-yama. More considerable mountains are only found again in the southern portions, where, on the borders of Shinano, Kotsuke and Musashi Mikuni-yama (Three-lands Mountain) strikes the eye. We have no information as to this range, yet we may infer from the nature of the pebbles in the rivers Kana-gawa and Kabura-gawa, which spring from it and flow into the Tone, that it is partly constructed of quartzite and granite. The Jiumonji-tôge, over which runs the road from Musashi to Shinano (from Arakawa to the Chikuma-gawa), is said to be 2,256 metres high.

Along the entire north-east border of the province of Kai, continuing on the one hand to Shinano, on the other to Musashi, although with a decreasing altitude, we observe a remarkable range, which we name after the best-known mountain, lying about the middle of the whole range, the Kimpu-san.¹ This chain, running from S.E. to N.W., connects itself in Kobushi-yama with the one previously mentioned, and from this point until past Wata-tôge separates the Chikuma-gawa from Fuji-kawa and Tenriu-gawa, then in its north-western branch separates the Chikuma from Sai-gawa. Towards the south-east the basin of the Ara-gawa, and the Tama-gawa is separated by it from the Baniu-gawa. Among the mountains which are here specially conspicuous in the ramifications of the range, we may name Bukô-san, or Chishibu-yama, which is visible far towards the north-west from Tôkio. Its height is given as 1,412 metres. Measured heights are :—Wada-tôge in Nakasendô, 1,646 metres, Tateshina 2,400 metres (estimate), Yatsuga-take 2,800 metres, Kimpu-san 2,525 metres, Kobushi-yama 2,000–2,400 metres, on the borders of Shinano, Kai and Musashi, Kobotoke-tôge 1,400 metres, in the passage from the Baniu-gawa valley to the basin of the Tama-gawa, Yanagisawa-tôge 1,413 metres from the Tama-gawa valley to the Fuyefuki-gawa.

A branch of this range, principally consisting of granite, syenite, and other crystalline rocks, runs as a watershed between the upper Baniu-gawa (Katzura-gawa) and the Fuyefuki-gawa south-west towards Fuji-san, and here continues, forming the low mountains along its northern side as far as to the lower Fuji-kawa. The two most notable passes over it; Misaka-tôge from Kamiyoshida in Fuji to Kofu and Sasano-tôge in Kôshiu-kaido, I found to be respectively 1,563 and 1,064 metres high. Tenmoku-san to the north of the Sasano-tôge, with a height of some 1,800 metres may be considered the highest summit. This range divides Tsuru-gori from the rest of Kai. This is drained by the Fuji-kawa, while the district of Tsuru is drained by the Baniu-gawa.

¹ The Kimpu-san was, and is, the famous source of the beautiful Suishô or rock-crystals.

Where Musashi, Kai, and Sagami meet, a second branch strikes off towards the south, and forms the boundary of the Kuwantô as far as the peninsula of Setsu, between Musashi and Sagami on the one hand and Kai and Suruga on the other. The range increases in height southwards, consists here of doleritic lava, and reaches a height of 1,000–1,300 metres. The Otomi-tôge on the way from Hakone to Subashiri on the east side of Fuji has a height of 1,031 metres; the Hakone Pass, where Tôkaidô crosses the ridge, lies 855 metres high. Here was the Kuwan or gate, the important border-post, which had to be passed on entering into the Kuwantô (the east of the gate). Hakone-tôge in Tô-kaidô, Kobotoke-tôge in Koshiu-kaidô, Usui-tôge in Nakasen-dô, Mikuni-tôge in Echigô-kaidô, Sannô-tôge in Aidzu-kaidô, and Shirasaka-tôge in Oshiu-kaidô, are the great mountain-gates through which the low-lying plain of Kuwantô and its chief town are approached.

The place Hakone lies 741 metres high, on a pretty mountain-lake, from which a river, the Haya-gawa, in a bend hurries to the sea near Odawara. The whole neighbourhood, especially the district within this bend, is commonly called the Hakone mountains. It is one of the most charming volcanic mountain districts of Japan. Merry streams, cool and splendid woods, numerous springs, including several solfataras and baths, and an industrious and friendly population, distinguish it; and as it can be conveniently reached from Yokohama in a single day, it is the country most visited and best known to foreigners. The highest mountain in it bears the common name Komaga-take, and is 1,345 metres in height.

To the north-east of the Hakone mountains, and due west from Yokohama, rises a mountain-mass, isolated, at least on the south and east, to the height of 1,324 metres. It is the Ô-yama.

The peninsula of Idzu, although it is no longer included with Kuwantô, is geologically and orographically so closely connected with the Hakone mountains, that it must be briefly described here. Its most prominent summit, Amagi-san, has a height of 1,430 metres; and another mountain, Kuro-take, is said to be 905 metres high. The Seven Islands also (Shichi-tô, or Idzu-no-sho-tô) are connected with it, not only politically, but also in virtue of their volcanic nature.

In the peninsula of Kadsusa-Awa no exact hypsometrical measurements have as yet been made. There are here too some considerable mountains, especially in the range running from E. to W., on the border of two provinces, *e.g.* Nokogiri-yama, Kio-sumi-yama. Better known and more striking are some other summits much visited by pilgrims, especially Kano-san, Atago-yama and Mitsuishi-yama in Kadsusa, Tomi-san, Iyoga-take and Goten-yama in Awa.

Toward the north the peninsula sinks to the low-lying plain of the Tone-gawa. But high above this tower the two cones of Tsukuba-san. Although the highest reaches only 678 metres

(Satow and Hawes' Handbook), they rise so abruptly from the great plain that they are regarded far and wide as notable landmarks.¹ Further north the boundary between Hitachi and Shimotsuke in this direction follows a range of heights in which Buche-san, Torika-yama and Yamizo-yama are the most remarkable points. The last-named mountain lies in the elevation which encloses the Kuwantô towards the north-east, separates the Naka-gawa from the Abukuma, and leads back to Nasu-san, the starting-point for our survey of the mountains in and around the Kuwantô. Of the mountains named, the following are plainly visible from various parts of Tôkio in clear weather: Tsukuba-san to the N.E., Nantai-san (Nikkô-san) to the N., Asama-yama to the N.W., Bukô-san to the N.W. to W., and finally Fuji-san in W. by S. This last, not indeed belonging itself to the Kuwantô, yet above all visible from it in all its peculiar character and dignity, may now serve as the starting point for our further survey of the orography of the island of Hondo.

V. MOUNTAINS TO THE WEST OF THE KUWANTÔ AND FUJI-SAN.

To the west of Fuji-san and Fuji-kawa we observe on the borders of Shinano and Kai a meridian range, which joins the branches of the far-stretching Yatsuga-take (Eight-peaks) in the saddle of the Kamanashi-gawa, along which runs the road from Kofu to Suwa-ko, soon rises to considerable heights, and from Tô-yama, where Shinano, Kai and Suruga meet, branches out and sinks. A branch continues the southern direction between Tenriu-gawa and Oi-gawa in Tôtômi. A second branch trends south-eastward on the west side of Suruga towards the lower course of the Fuji river; a third finally continues the separation of Tokaidô from Tosandô westwards, and ends by losing itself in the Owari-Mino plain towards the Kiso-gawa. Its elevation is nowhere considerable, and almost all the more important rivers of Tôkaidô, especially the Tenriu-gawa, run through it. Amongst the summits we note the following: Komaga-take (2,723 metres), Jisoga-take, Arakawa-take, Tô-yama, Koitori-yama, Shichi-men-san (1,562 metres), Horai-san, Fudo-yama, Akihasan.

With the possible exception of the highest peaks, the central mass of this range, and also its branches, appear to consist of granite and similar rocks. This granite occurs in many instances even in the branches of Mikawa and Owari. Old non-fossiliferous schists (graywacke, flint-schists, and dark clay-schists) follow each other; then come tertiary formations, *e.g.* in Tôtômi, Mikawa and Owari. The central range branches out towards the Fuji-kawa and displays here in the basin of the Haya-gawa near Amabata splendid dark clay schists (Amabata-ishi) which serve the whole

¹ The higher peak of Tsukuba-san is dedicated to Isanagi, the other to Isanami; both have many Shintô temples, and are very famous.

country for inkstone (suzuri), and in another place gold-bearing quartzite. As Komaga-take is probably the highest summit in the whole range, and gives its name to the district in Kai which is drained by the Haya-gawa (right tributary of the Fuji), I call this range the Eastern Komaga-take, or Foal Mountains, and designate on the other hand as the Western Komaga-take chain¹ the parallel mountain range which acts as watershed between Tenriu-gawa, Sai-gawa and Kiso-gawa, and on both sides, but especially towards the Kiso-gawa, falls steeply down. From Shiwojiri-tôge on Suwa-no-Kosui, whither the great watershed of the two seas leads from the Kimpo-san mountains, this follows this mountain range southwards and parallel to the Sai-gawa, and running here along heights of 1,000-1,400 metres. Then it turns around the sources of the Sai-gawa, past the Torii-tôge westwards to Hida. From Torii-tôge the mountains attain their greatest summits between the Tenriu and Kiso-gawa. None of them have yet been ascended and accurately measured, but according to an estimate Yabune has a height of 2,000 metres, Komaga-take 2,600, Ono-yama and Nakibiso-take each 1,600, Ena-san 2,000 metres. In the latter, and further southward, the mountains form the boundary between Mino and Shinano, then cross over to Mikawa, and here unite with the western branches of the eastern chain.

The basis of the western Komaga-take chain consists likewise of granite, which occurs in hundreds of places along its entire length; but the higher summits appear all to be volcanoes. Undoubtedly this is the case with Komaga-take. The mass of this great mountain appears far-stretching, steep-walled, shattered, and naked; and its summit is said to be crowned by a lake, while it is visible even from Mikawa in Tôkaidô.

A third parallel chain was named by me the Snow Mountains.² It is also called the Hida-chain (Hida-no-yama), because it is most characteristically developed on the borders of Hida and Shinano. Like the two others, its direction is from N.N.E. to S.S.W. It is the largest mountain range in Japan, uniform in its geological foundation, towering steeply to considerable heights, wilder, more broken, and more difficult of ascent than any other, a range that makes an imposing impression even at a great distance, *e.g.* from the summit of Fuji, of Asama-yama, and other lofty stand-points, that seems in many places to rise up like a wall, and even in late summer displays great drifts of snow, even in the mountain passes. From the Japanese Sea, into which its granite cliffs fall steeply, though from no great height, it stretches to the sources of the Masuda-gawa at the foot of Norikura, for a distance of about 80 miles, separating Echiu first from southern Echigo, then from

¹ Both these Komaga-takes are also distinguished according to their provinces, as Kôshiu-no-Komaga-take and Shinano-no-Komaga-take.

² "Reise in Nippon," 1874, in Petermann's Geogr. Mittheilungen, 1875, p. 220.

Shinano, and in its further course separating this from Hida. A deep saddle lies between Norikura and On-take and ends the southerly direction of the range; and after On-take none of the many heights which appear further in the watershed between the Kiso-gawa and Hida-gawa (Masuda-gawa) attains more than 1,600 metres. Yet this range of heights running parallel to the Kiso and tending towards the south-west, must in its whole character be regarded as the continuation of the Hida chain.

On the east side, the foot of the whole range falls rapidly to the valleys of the Hime-gawa and Sai-gawa, on the south-east also to the Kiso-gawa. Granite (and in places diabas) forms everywhere here the substratum; over which vast quantities of igneous and volcanic rocks have been poured from time to time, while in several places, chiefly at low elevations, a series of sedimentary rocks is piled up against its sides. On the side of the Hida on the west, the mountains fall more gradually to the Kurobe-gawa, Takara-gawa and Masura-gawa. The loveliest forests of Hinoki and other esteemed conifers which are known in the country, are found in these mountains, and when at considerable height the trees cease, Arctic-alpine shrubs and plants appear on many summits, whose nature and association will supply material for much interesting inquiry. A more exact investigation of this whole range is still a *pium desiderium*, though the journeys of Atkinson, Satow and Hawes have lately done much to give a clearer idea of it. Of its two most important passes, the northern Harinoki-tôge (Alder-pass) was crossed in the summer of 1878 by Satow and Hawes. It lies on the route from Matsumoto on the Sai-gawa to Tô-yama in Echii, which leads past Ikeda up the Takase-gawa to the pass, and then down to the Kurobe-gawa. This mountain-pass was found to be on the borders of Echii, Hida, and Shinano, 2,400 metres high (about 7,900 feet).¹

Hida-tôge, or Nomugi-tôge, over which we have to pass on the way from Yabuhara in Nakasendô, or from Matsumoto to Takayama, the chief town of Hida, has been found to be above 800 metres high. Tate-yama, or Riusan, in Echii (2,820 metres) and Mi-take, or On-take, in Hida (3,004 metres), are famous volcanoes; but they lie rather outside the chain towards the west. The top of On-take contains a half-dozen craters forming a series which follows the long ridge from north to south. It is not these, however, but the imposing figure of the mountain in itself, and the wide prospect, which in clear weather it offers in nearly all directions, that have made On-take a sacred mountain, and attract to its summit from 5,000 to 6,000 visitors from Fukushima in Nakasendô every year.

¹ A description of it, and of the plants found about it, in the *Japan Mail*, is amongst the most valuable contributions to the geographical and botanical accounts of travel in Japan.

In the chain itself the most conspicuous peaks in the order from north to south are Jidake (2,620 m.), Goroku-dake (2,774 m.), Yariga-take (3,048 m.), and Norikura (2,987 m.). These peaks have lately been ascended and their heights ascertained. The steep and rugged Yariga-take appears to be next in height to Fuji-san, and Jidake to be the highest granite-peak of Japan.

Where the western Komaga-take chain in Ena-san, Maya-san, Okabu and Nakibiso-take on the borders of Shinano and Mino give a different direction to the Kiso-gawa, and on the right bank the Yatate-yama (Ishi-yama) helps to narrow the valley, the southern branch of the Snow Mountains also turns more to the west. With heights of 1,000 to 1,200 metres, it accompanies the Kiso as far as the inflow of the Hida-gawa. The more considerable heights, however, remain in Mino far removed from the Kiso on the border towards Hida, and only disappear altogether in the neighbourhood of Gifu.

An interesting hill-country in the north of Shinano and the neighbouring Echigo, which is separated from the Snow Mountains by the Sai-gawa and Hime-gawa, runs for the most part on the border of the two provinces as far as the Shinano-gawa, and is marked by tertiary strata overlying older schists and a number of isolated lofty volcanic cones. In these mountains lies the Fuyô-ko, or Lake of Nojiri at a height of 652 metres. Not far from it Hokkoku-kaidô, the most important road from Shinano and the Kuwantô to Hokurokudô, attains in the Nojiri-tôge a height of 704 metres. The volcano Yaki-yama was ascended by Von Drasche, who estimates it at 7,000 feet (2,133 metres). A still more striking lofty summit to the left of the way from Nojiri to Takata, the Miôkô-san, is not much inferior to it in height.

The Shinano, Kiso, and Tenriu drain Shinano. Where the Kiso leaves the province, its bed is still at a height of 420 metres, and of 950 metres where, on leaving the mountains at the Torii-tôge, it first forms an arable valley. Of the Tenriu-gawa we know that its basin, Suwa-ko, lies 800 metres high, and are justified in assuming its exit in Shinano to be of about the same height as that of the Kiso. The region of cultivation also rises as high upon the Sai-gawa as upon the Kiso-gawa. Toward the basin of the Chikuma-gawa tillage hardly rises over a thousand metres from the sea. The Hokkoku-kaidô passes over the Sai-gawa near Tambashima a little above its inflow into the Chikuma, which enters Echigo, at a height of about 300 metres. From this it appears that Shinano slopes most towards the north, but its lowest part lies 300 metres above the sea. The cultivated soil of the province lies between 300 and 1,000 metres high, the average being about 600 metres, and besides hardly amounts to 8% of the entire area. Thus Shinano is eminently a highland, a mountainous country. The same is true of the neighbouring Hida.

The mountain-wall which entirely divides Echigo from the

province of Tôsandô is continued also in the southern provinces of Hokurokudô, although it is less lofty and compact. Thus from the basin of the Kurobe in the Snow Mountains onward, a range of heights forms the boundary between Hida and Echii, which does not detain the rivers of Hida, the Jintsu-gawa and Shira-kawa, on their way to the coast, and does not exclude the view from the distant On-take to the sea and the peninsula of Noto. A more compact character and larger dimensions are displayed by the Kaga Mountains, westward of the Shira river, where Haku-san and Bishamon in the district where the four territories of Kaga, Echizen, Mino, and Hida form a centre, to which the great oceanic watershed runs from Norikura diagonally through Hida. The chief mountain range has here a southerly direction. To the north, it forms the boundary between Kaga and Echii, and is then continued with a decreasing altitude into the peninsula of Noto, where Washinosu is said to be 610 metres high. The wooded ridges are however higher and more self-contained the nearer we approach to the point of junction. Towards the south-east, the mountains follow along the borders of Hida, and another branch of the mountains runs north-west to the Japanese Sea between Kaga and Echizen, and in this branch is the Dainichiga-take. The main range which is the further boundary between Hokurokudô and Tôsandô, and at the same time the great drainage shed between the Japanese Sea and the Pacific, is continued south-west to the basin of the Katsura-gawa on the borders of Yamashiro, Omi, Wakasa, and Tamba. Before, however, we follow it further, we will cast another look at that lofty giant-mountain, which does honour to its name White Mountain (Haku-san, or Shiro-yama) by wrapping its head in snow the greatest portion of the year, and by showing many a white drift even in summer.

Haku-san, which forms a far shining landmark to the sailors in the Japanese Sea, lies, together with the two highest volcanic summits of Japan, Fuji-san and On-take, in a line, which runs across the broadest part of Hondo, from S.E. to N.W. It ranks with them also in point of height, although it is some hundred metres lower than On-take, and only reaches 2,720 metres. It is an imposing mountain-mass, built upon Jurassic sandstones and trachytic conglomerates of magnificent hornblende andesite. This and its surprising wealth in vegetable forms make it one of the most interesting mountains of Japan. None of the numerous lofty summits of the country has, as yet, offered so interesting a field for botanical geography; and it appears indeed that only the Snow Mountains of Hida can exhibit an equally rich and remarkable collection of plants belonging to various Floras of the world. Obviously the snow, which even at its foot at Ichinose, at a height of only 800 metres, often covers the ground in winter to a depth of 18-20 feet, plays an important part here in the conservation of many botanical species. Little temples decorate the three peaks

of Haku-san, and in July and August are much visited by pilgrims. At its foot, near Ichinose, a strong chalybeate bath offers to many invalids a prospect of recovery.

Between Lake Biwa and Wakasa-wan, the great Oceanic watershed already mentioned forms only a low ridge, the passes over which are hardly 300 metres high, as the Hoosaka-tôge on the way from Imadzu to Obama, and the Fukasaka-tôge on the road from Shiwotsu to the port of Tsuruga. More considerable are various southward running ranges of heights, which start from here, and are connected with the mountains of Yamato. There are three of them which form the eastern boundary of Omi, as well as the eastern and western boundaries of Yamashiro. On the borders of Omi we observe first two mountain-ranges, which at the same time embrace the basin of the Biwa-ko on two sides, some of whose several members played a part in the history and mythology of Japan, and are therefore better known than many much more considerable summits. On the east side of Biwa Lake, Ibuki-yama is the most conspicuous of these summits. Its height is about 1,300 metres, and as it has a low foreground, and rises pretty steeply, it is the most imposing mountain form for far and wide. Amongst the ancient Japanese it was always regarded as the residence of the devil. Probably it offered in ancient times safe hiding-places to notorious robbers, from which they sometimes fell upon the travellers in the neighbouring road (Nakasendô), sometimes paid their nightly visits to the peaceful inhabitants of the surrounding towns (Hikone, Kiôto, etc.) Thus Yamato-dake, according to the fable, as he returned along Nakasendô from the Kuwantô, overcame a mountain spirit of Ibuki-yama. In earlier Japanese medicine, Ibuki-yama had a conspicuous place as the producer of many officinal plants. Some of the spurs of Ibuki-yama reach as far as Nakasendô. On its slope lies here Sekigahara, the famous battle-field of the year 1600. Further to the south again rise mountains of 1,000-1,200 metres high, as Riezen, Hotokegai, and yet more to the south Kamiga-take. The range of heights here takes a south-westerly direction, follows the boundary of Ise, first towards Omi, then towards Iga, and finally passes into the mountains of Yamato. The mountains on the west side of Lake Biwa, which form the eastern boundary of the plain of Yamashiro, are only 800 to 900 metres high. The three best known are called Hirano-yama, Hiye-san, and Ko-yama. They form the highest summits (900, 825, and 420 metres) in the watershed between the Kamo-gawa and Lake Biwa, a narrow mountain ridge, which falls steeply down towards the lake, is built up of old schists upon granite, and is crowned with basaltic peaks. Hirano-yama, as the northernmost and highest of them, bears snow till the latest period of spring. The best known and most famous is Hiye-san. When, in 794, the Mikado Kuwammu-Tennô removed his residence to the modern Kiôto, and built Heyanjô (the Palace of Peace), he erected also on

Hiye-san for the Tendai sect, that temple with monastic buildings, which afterwards attained so much importance. According to Buddhist superstitions, all evil comes from the north-east, Ki-mon (Devil's gate). Here then, in the Ki-mon of Heyanjô, the priests were day and night to watch, pray, beat the drum, and ring the bells, in order to keep evil far away from the palace and the capital. In the golden age of Buddhistic monasticism there were upon Hiye-san nearly 3,000 priests and monks, who often exercised great influence upon internal complications. Now the site is fallen into decay, only a few buildings and a magnificent grove of *Cryptomerias* remind us of bygone splendour. The range of heights falls down to the Uji-gawa, but on the other side of it is continued by mountains of 500-600 metres high, and then passes into the higher mountains of Yamato. Kasuga-yama to the east of Nara (600 metres high) must be reckoned with it.

In the third parallel ridge,—which forms the western boundary of the plain of Yamashiro, slopes down to the Yodo-gawa and beyond it again gradually rises, and then runs between Kawachi and Yamato,—we observe to the north-west of Kiôto the well-known Atago-yama (884 metres), then, to the east of Ôsaka, on the road leading to Nara, Ikoma (600 metres), and further to the south Kongô-san and Kadsuraki-yama some 1,200 metres high to the north of the Yoshino-gawa. The long ridge of Kongô-san, lying in Yamato on the right of the Yoshino valley, is noteworthy as the producer of the pyrope sand, with which the *suishô* (clear rock-crystals) have been polished from time immemorial.

The closer relation of the mountains of Yamato and Ki has not yet been sufficiently ascertained. No doubt the main range has a southerly direction and has Omine-san, to the south-east of Yoshino, for its principal summit. It is much visited by pilgrims from this town. Knipping found it to be 1,882 metres in height. The road runs along a wooded ridge southward through virgin forests which cover the steep sides full of ravines and soon shut off the at first beautiful prospect northward towards the Yoshino valley. It is exceeded in height by many mountains in Japan, but is hardly surpassed in wealth of forest, in wild forms and crags. Knipping brought me, as I could only view the mountain from some distance, a specimen of rock from the summit. It was a piece of flint-schist. Omine is thus one of the loftiest of the non-volcanic peaks that have yet been accurately measured, if we except Kimpu-san and the Hida range.

To the south-east of Omine-san rises what is probably the second highest summit in the peninsula of Yamato, Odai-yama, to a height of 1,689 metres (according to Capt. St. John) also in a wildly magnificent and richly wooded mountain landscape. To the east of Omine and Odai-yama, near the point where Yamato, Ise, and Ki meet, is found a marshy plateau, the Odaiga-hara (1,280 m.), where the Yoshino-gawa, Miya-gawa, and Otonashi-gawa have their

sources. Of the other mountains of the province of Kii may be mentioned, though by no means as the highest : Tamaki-san near the southern corner of Yamato (1,143 m.), Haki (650 m.), to the south of Odai-san not far from the coast ; Nachi-san, to the south-west of Shingu, where is the famous water-fall, Nachi-no-taki, 84 metres high, only 2 ri from the coast ; and Kôya-san (500 m.), with the famous temple and free town of Kôya, to the east of Waka-yama.

The numerous promontories of the precipitous coast of Kii and Ise, which form as many small and in some cases very deep and sheltered bays, are only the spurs of the numerous mountain-ridges, which, starting from the highlands of southern Yamato, spread out in the shape of a fan. It is a wild and broken mountain country. Little-trodden forests clothe its schist mountains to their crests, and offer a wide and free hunting-ground to the wild animals of the country. The valleys in summer are charming, with the clear water of the streams hurrying in a winding course through their bottoms, while, in addition to the stately ferns and many kinds of shrubs, blooming azaleas decorate the rocky banks and the perfume of countless white lilies fills the air. Being sheltered from the rude north and north-east winds, several of the valleys of Kii opening towards the south present under the mild influence of the Kuroshiwo a sub-tropical climate, in which the beautiful mandarin oranges ripen, with which the market of Tôkio is so abundantly supplied. The province of Kii is included in Nankaidô, and thus forms one group with Shikoku and Awaji. From a climatic standpoint this is quite justified.

The great south-western peninsula of Hondo, the Chiugoku or central country, which lies between the Japanese Sea and Seto-uchi, joins the mountains of Yamashiro and Setsu in the mountain country of Tamba.¹ It is rather a hilly than a mountainous country. The main range of heights follows the longer direction of the peninsula, and divides Sanin-dô from Sanyo-dô. Branches of it run out northwards and southwards between the several provinces. The great Oceanic watershed indeed follows principally the central ridges, yet repeatedly diverges from them to a considerable extent. Often the passes lead at a height of barely 300 metres over rounded schist-ridges and the elevation is barely perceptible. The height of the most important mountains on the

¹ I saw the provinces of San-yo-dô only from shipboard while sailing through the Inland Sea and from Shikoku, and did not make any closer acquaintance with the district. Most of the foreigners who have travelled in it have so far followed the old road from Hiogo to Shimonoseki, or the most convenient route between the two seas from Himeji past Ikuno to Toyooka and to the Japanese Sea. Accordingly, with the exception of Kempermann's valuable account of a journey through the central provinces, there is little literature relating to this district at my disposal, so that I have had to rely chiefly upon Japanese maps and upon the few scattered notices that I could collect.

border-ridges themselves only occasionally, if ever exceeds 1,000 metres. It is more considerable in a few isolated volcanic cones of Sanin-dô. Thus Naumann found the trachytic Daisen in Hoki top 1,640 metres high, while Kempermann fixed it at as much as 1,702 metres.

In many mountain districts, *e.g.* in the provinces of Iwami and Inaba, agriculture is limited to the little basin and narrow valleys, and embraces hardly five to six per cent. of the whole area. The cause of this incapacity of cultivation is not the steepness of the ground or the rudeness of the climate, but the dry and rocky soil of the rounded schist-ridges. In the broad valley-bottoms of the larger rivers, especially in Sanyo-dô, the alluvial soil is for the most part very fertile, and flourishing agriculture may be found, as, *e.g.*, in Harima.

C. THE RELIEF OR ELEVATION OF THE ISLAND OF SHIKOKU.

The western boundary of the province of Kishiu towards the Gokinai is formed by a chain of heights coming from Yamato, which runs parallel to the Yoshino-gawa from north-east to south-west and falls steeply down to the Idzumi-nada. Beyond it a mountain-ridge in eastern Awaji follows the same direction, and finally we see that the long schist-ridges also which appear in Shikoku continue this line, *i.e.* likewise have their main strike towards the south-west. As boundary between Sanuki and Awa, afterwards between Iyo and Tosa, the mountain-crest, if it is found here, traverses the whole length of Shikoku, as the most important river of this island, the Yoshino-gawa, does for the northern portion. But there are also parallel chains, and on the other hand branches run out from the main range in the direction from north to south, which in lithological character as well as in elevation essentially resemble the central chains. Thus then we observe in Shikoku a number of considerable mountain ridges of substantially the same height—1,000 to 1,200 metres—above which the highest summits hardly rise 100–200 metres. The eye therefore is unable to decide which mountains really overtop the others; and as the first measurements of height in this island were taken by me and only related to the mountain passes, our hypsometrical knowledge of it is still very defective. At the sources of the Mito-gawa to the south of the town of Saijô the mountain Ishidzuchi-yama rises to the north of the central chain and is visible far and wide. I estimate its height at 1,400 metres, and consider it one of the highest summits of the island, if it does not in fact surpass all the others. As compared with these summits the passes are high, which results from the nature of the elevated and otherwise disturbed strata old schists. Sasa-gami-tôge and Hirayama-tôge, *e.g.* in which the road from Kochi in Tosa to Kawanoye on the Inland Sea in Iyo crosses the central ridge and a parallel

one, are at a height of 1,100 metres, and in another direction, viz. on the way from Kochi to Matsu-yama in Iyo, a ridge 835 metres high is crossed on the boundary. There is no lack of water in these mountains, and therefore there are also magnificent forests everywhere, where human folly has not carried the brand of destruction.¹ In the higher regions the eye is delighted by a vigorous growth of deciduous trees, where horse-chestnuts and magnolias are variously intermingled with beeches, oaks, maples, ashes, and alders. But laurel-leaved oaks, camellias and other evergreen trees venture much nearer to them and higher than in Hondo, while still lower camphor-trees and other cinnamon-species, the wild star-anise, *Nandina*, and many other plants which we only find in the main island in a state of cultivation, take part in the composition of the evergreen forests.

In the lower courses of the rivers extend small and fertile plains, in which too the largest towns are situated, as the plains of Tokushima, Takamatsu, Saijō, Matsuyama and Kochi. In Sanuki, the plain of Takamatsu is fringed towards the sea by several volcanic cones, quite distinct from the schist mountains in the interior. They include no important heights but are a very striking feature in the landscape. Perhaps the most regular and beautiful among them is Shiramine or Sanuki-fuji, which rises behind Marugame. With the southern portion of the island, as well as Awa, I am not acquainted, yet I should conclude from analogy that here too some of the isolated fringing heights are volcanoes. In Awa this will probably be the case with Nakatsu-mine and Shōsanji-yama; in Tosa, amongst others, with Gozaisho-yama.

D. MOUNTAINS OF THE ISLAND OF KIUSHIU.

Corresponding with the long axis of this island runs its most important elevation in a southerly direction from the Straits of Shimonoseki to its southern point, Satano-misaki. Yet it is neither a continuous range of uniform geological structure, nor always the natural boundary and watershed, although, as regards the latter, the sources of nearly all the more considerable rivers may be found here. A glance at the prevailing direction of most of these rivers teaches us that they flow down either eastward directly to the Pacific or westward to Amakusa-nada and its different parts, while only a small number, with an essentially northern direction, carry their waters to the Inland Sea. From the central ridge, as von Richthofen has already pointed out, in the direction from W. 30° S. to E. 30° N., or almost exclusively from E. to W., there run considerable ridges of a very old schist mountain formation as the watershed between several of these rivers and form in part the natural boundaries of provinces, as between Higo and Satsuma,

¹ In order to promote the growth of Warabi (*Pteris aquilina*), the roots and young shoots of which are prized as food!

Hiuga and Bungo ; yet the most important elevations lie, not on the borders, but more to the northward and wholly in Bungo. The boundary-ridge between Katsuba and Shigeoka is only some 500 metres high, on the south side rising gently and well wooded, towards Shigeoka falling steeply and rather sterile. Then succeeds a schistose hill-country along which rises the way to the crest of the Mi-kuni-tôge,¹ which is crossed between Onoichi and Miyenoichi, and leads into the valley of the Shirataki-gawa. The pass is 647 metres high and affords, as the surrounding mountain-ridges are only a little higher, an extensive and interesting prospect. Towards 75° north-east are descried the mountains of Shikoku, towards 67° south-west a lofty wooded summit with bare, extremely jagged top which we were told was called Nishi-yama-take (West Mountain peak). Somewhat further north-west of it rises the volcanic cone of Asô, but almost exactly to the west of our standpoint we descry an extensive saddle-like depression in the central range, and away beyond it parts of Higo. This is the direction in which runs the road from Oka to Kumamoto. To the north of this depression again rise higher mountains, while almost due north the isolated volcanic cones of Bungo are seen rising from the plain.

The western portion of the boundary range between Satsuma and Higo was crossed by Woeikof on his way from Ushiyama to Mitsumata, at a height of 572 metres. Here also, as I found to be the case at Mikuni-tôge in Bungo, the ascent from the south is gentle, but the northern declivity is very steep, corresponding with the dip of the schist strata. "In the north-west the sea could be seen with deeply cut bays and high islands, in the south-east the peak of Kiri-shima covered with snow (it was mid-November). The higher mountain-ridges were about as high as the one that I travelled over and were covered partly with wood, partly, as the one I visited, with grass and dwarf-bamboos. The direction was directly from north to south," says Woeikof, which is not the case indeed with those that I crossed.

The central mountain range falls northward as well as southward to the sea. Apart from the volcanoes Asô and Kirishima-yama its highest summits appear to lie near the boundary of Higo and Hiuga. Their height however barely exceeds 1,400-1,500 metres. The road from Hitoyoshi to Sadowara crosses by the Ichi-ri-yama-tôge (One Ri mountain pass) in Higo, and then on the border of Hiuga the Tempagoshi-tôge, which must be nearly 1,000 metres high. Northward of it rises Eshiro-yama, and still further to the north, likewise in Hiuga, yet near the boundary of Bungo and Higo, rises Somo-take.²

¹ This "Three-land pass" is called after the three Daimio dominions of Oka, Sayegi, and Utsuki, which here met together.

² This is probably Nishi-yama-take, which is visible from the Mi-kuni-tôge.

In Higo rise Haku-san, and further to the north Asô-yama. The latter is at present the only active volcano in the island Kiushiu; and on this ground, as well as on that of its towering form (its height is probably 1,500 to 1,600 metres), is especially remarkable. Following from Kumamoto the valley of the Shira-kawa in an easterly direction we reach at the end of the ten ri road, after passing a considerable waterfall, the Nana-taki, the foot of Asô. The greyish-white pumice ashes which from time to time it sends down to the river give the water a white tinge, and hence the name. This happened last in 1874. On the border of Bungo and Buzen we observe Hiko-san.

Particular attention is due to the volcanic mountains on the borders of Ôsumi and Hiuga, north-west of Kagoshima Bay, which are called Kirishima-yama. On leaving the coast of the Bay we first cross the plain of the Kokubu district, which is important for its tobacco culture. The road then enters the valley of a strong stream. The river-bed and fields are covered with greyish white pumice ashes and good-sized fragments of pumice-stone (Karu-ishi, *i.e.* light stone). Some ri farther on, the way runs through volcanic hills 250 to 500 metres above the sea—a somewhat barren and untillable country. It is a Hara on volcanic ashes which produce but little. Brakeferns and Lespedeza bushes are the principal plants. Only here and there appears a crippled black fir, which has resisted the flames that every autumn sweep away the summer's vegetation. Only in the valleys of erosion, true barancos, into which the fire cannot penetrate, beautiful trees have maintained an existence, amongst them edible chestnuts, evergreen oaks, and the Sakura (*Prunus pseudo-cerasus*). This is the south-west threshold of Kirishima-yama. The place Kirishima itself, from which the volcanic mountains derive their name, lies 465 metres high. Further north, in a lonely and luxuriant ravine, is the sulphur spring Enoyu, at a height of 844 metres. The spring has a temperature of 75° C., the bath of 43° C. Between here and Kirishima are descried the ascending steam from seven other solfataras. All of them deposit much sulphur.

Both the most important heights of these mountains, Shiratoritake and Takachiho, are easily ascended from Enoya and Kirishima respectively. In the skyline their summits are 2½–3 ri distant from each other. Between them, on the steep northern side of Takachiho runs at a height of 1,060 metres the way from Kirishima across to Nojiri, descending through splendid woods of evergreen and deciduous trees, intermingled with various conifers. It ascends from Kirishima through a similar wood. Here grow bamboos, camellias, and star-anise at a height of 900 metres. Momi (*Abies firma*) and Sugi (*Cryptomeria japonica*) with a circumference of 5 to 6 metres here play the part of the old oaks that are found in Europe scattered amongst younger trees. After traversing this magnificent forest, in which the usual creepers such as

Katsura, Wistaria, Actinidia, are not wanting, we cross an old field of lava with a light covering of stunted firs and alders. We must now turn off the roadway to the right in order to ascend Takachiho. We soon begin a steep ascent over ashes and scoria, but it takes over an hour longer to reach the margin of the crater at a height of 1,469 metres. The smell of sulphuretted hydrogen and the warm ground which we perceive as we walk along the northern wall show that the volcanic activity has not yet entirely disappeared here. The crater may be 700 metres in circumference and 30 metres in depth. On the west side, where once the mighty lava stream poured forth towards Kirishima, we descend gradually downwards to the crater-floor, which is partly covered with rubbish and vegetation. On the east side, where is the higher, steeper wall, it falls outward to a lower saddle-formed fissure, then we mount eastward again for about half an hour up a steep ascent to the conic summit of the mountain, which, instead of a crater, bears upon a pile of gathered stones the famous sword of heaven (see the historical part for a further account). The north side of this steep summit is covered with brownish-red scoria. Shiratoritake appears from Takachiho (1,672 metres high) a mighty, almost equally high, but less sharply pointed mass. At the top there is said to be a lake. I regard these two summits of Kirishima-yama as the highest in Kiushiu.

Of the other lofty mountains of southern Kiushiu, which are all probably volcanoes, we note Komatsu-yama, north-west of the town of Obi, to which charts assign a height of 1,280 metres, Kaimontake on the southern point of Satsuma, and above all Mi-take on Sakura-jima in the Bay of Kagoshima. This magnificent mountain covers the entire island and rises—more steeply on the south and east sides than on the north—to a height of about 1,000 metres. If we view the island from Tano-ura on the north coast with a fieldglass, we perceive clearly the carefully tilled fields which supply Kagoshima with vegetables, and especially with choice radishes, as well as the terraces planted with wax- and orange-trees. Behind the gradually rising region of culture the mountain then rises more steeply, and appears as an extremely rugged and tremendous grey mass, which in places, particularly in the lower ravines, is well wooded, but above ends in being bare and stumpy. As recently as about sixty years ago the crater of this beautiful volcano is said to have sent forth clouds of steam.

When the craters of Kirishima-yama, Sakura-jima, and various other volcanic summits in southern Kiushiu for hundreds of years and more were sending forth their volcanic lavas, bombs, and showers of ashes, these masses covered a great part of the once fertile district of Satsuma, Ōsumi, and southern Hiuga (the old humus can still be recognised in many places beneath the covering of tufa and ashes); and these have formed a hill-country in which the good roads now sometimes run through ravines of erosion 10-

25 metres deep, or through artificial cuttings in the flat hill-ridges of greyish-white deposits of ashes and tufa. In spring the slopes of these hills and ways are adorned by the blossoms of numerous Azaleas, Deutzias, and other shrubs, as well as by beautiful ferns. In places too are found groves of pine and plantations of wax-trees; but upon the whole the ground is unproductive, and agriculture is confined to the generally narrow valleys which have been formed by the erosion of rainfalls and of the streams flowing from the mountains, and yet even these parts of the country are not without variety. This is due to the careful cultivation of the ground that admits of it, and in particular to those magnificent groves of bamboo-canes and all kinds of ornamental trees, amongst which we are particularly struck by camellia trees 6-8 metres high, and attaining a circumference of $1\frac{1}{2}$ metres. In these groves as elsewhere lurks here and there a house, a temple, or a whole village. Hiuga is in general much more fertile than Satsuma, especially along the sea in the plain, which extends about the lower courses of several rivers. The most favoured portions of the island belong, however, to Higo, Chikugo, Chikuzen, and Bungo, in whose plains and flat hill-countries the products of the disintegration of volcanic rocks have frequently combined with the alluvial deposit of the rivers to form a very productive soil. Amongst them may be noted: the district about Kumamoto, the plain of the lower Chikugo-gawa, the greatest part of Chikuzen; the plain of Funai. Of the volcanic cones which rise in the north of the last-named plain, Tsurumiga-take (600-800 metres high) is the most striking. Hiko-san, on the borders of Bugo and Buzen, appears to be higher, but its volcanic nature has not yet been sufficiently proved.

The peninsula of Hizen forms a separate orographical district. The main highway of Kiushiu, which leads on the one side from Nagasaki to Saga, on the other from Kagoshima past Kumamoto also to Saga, and thence further to Kokura in the Straits of Shimono-seki, rises in its last portion nowhere as high as 100 metres. The same is true of the road which connects Saga with Fukuoka. There is here, therefore, a sort of depression of the ground, which we may consider to some extent as a northern continuation of the Bay of Shimabara, by which the mountainous Hizen, with its coast, so deeply indented and broken up by the sea, is separated from the rest of the island of Kiushiu. Volcanic formations are here, too, interchanged with sedimentary strata of old and recent schists and sandstones, though, generally speaking, the latter prevail in the north-eastern, the former in the southern part; and here again the most important elevations are the volcanic. Thus the heights which surround Nagasaki, and are 250-400 metres high, are volcanic; and the highest mountain in the neighbourhood, Yagami-take, which rises a few ri eastward of the town, to the height of 600-700 metres, and provides it with excellent building-stone, is a trachytic cone. The most important development, however, of

volcanic products is in the peninsula of Shimabara in Onzen-gake. The height of this wild and rugged volcano, which only 200 years ago, in Kaempfer's time, continually smoked, so that the smoke was visible at a distance of 3 ri ($7\frac{1}{2}$ miles), is estimated at 1,000 metres. At its base are many hot springs. The last eruption took place some 90 years ago. Opposite the peninsula of Shimabara, on the coast of Higo, several volcanic mountains fringe the plain of Kumamoto, 200-400 metres high, as Kinpu-zan, which obviously belong to the same eruptive district.

The island of Amakusa is very mountainous. Its schist ridges rise like high, steep waves behind each other, attain a height of 300-400 metres, fall steeply, though from no great height, down to the coast, and leave but little arable land of no great value between themselves.

E. THE ISLAND OF YEZO.

The mountain-system in Yezo may be regarded as continuations of those of Saghalien and the Kuriles. That of Saghalien with a southerly direction we can follow in its southern continuation along the whole west coast of Yezo. The second mountain-system continues the range of the Kuriles, begins accordingly in N. $20-25^{\circ}$ E., and reaches to S. $20-25^{\circ}$ W. To these two mountain-systems Yezo owes its four corners, and to their crossing its most considerable elevations. The mass of the chain running from north to south, consists of granite and old schists; in the axis of the range running towards S. $20-25^{\circ}$ W., volcanic formations predominate, with trachytic and basaltic rocks.

The relief of this Island of the Ainos exhibits a central and a lateral district of elevation. From the central district the country falls on all sides in the direction of its four corners. Tokachi-dake, at the sources of the Tokachi ($43^{\circ} 48' \text{ N.}$, and $143^{\circ} 10' \text{ E.}$), with a height of 2,500 metres, is the centre point from which towards all quarters the great rivers of the country, some of them, as the Ishikari, in a strikingly meandering course, hasten to the sea. The second most important elevation of this mountain-mass is Ishikari-dake, south-west of the former, and 2,350 metres high. All the higher mountains in the west of the Island of Yezo belong to the lateral chain of elevation, the Saghalien system, or are volcanoes alongside it. Shiribetsu-dake is supposed to be the highest of them, with a height of some 2,400 metres. Ofuyu-dake, or Shokambetsu, in Teshio, is estimated at 1,800 metres in height, and about the same height is supposed to be Shibetsu-yama in the same province. In Iburi are Tarumai-yama, Mombetsu-yama, and Usu-yama; in Kushiru, Meakan. Also in Ōshima, especially to the north of Hakodate, are some remarkable volcanoes; above all the conical Komaga-take, which is also called Sawara-dake, and is 1,200 metres high. Amongst the smaller islands which are included

with Yezo, Rishiri, on La Pérouse Straits, possesses a volcanic summit; likewise in the Kuriles or Chishima, whose mountainous nature has long been known, eight or ten volcanoes may be found.

F. THE ISLAND OF SADO.

As is shown us by any tolerably good map, the relief of this island falls into three parts: two parallel mountain-chains, which repeat upon a small scale the main extension of the mountains in Hondo from north-east to south-west, and a plain dividing them along a line where the island is narrowest. We shall hardly go wrong in concluding, when we look at the conformation of the here approximating bays, of the neo-tertiary marine deposits occurring in the interior, and of the general phenomena of sæcular elevation, that here the sea once effected a complete separation, and that Sado was formed of two smaller islands. In the north-western mountain-chain, which is the oldest and most important source of gold and silver in Japan, rises, as the highest mountain in the island, Kinmoku-yama or Kinmoku-san, to a height of 1,370 metres.

Notices as to the relief of the smaller islands and groups of islands will be added to the respective sections of the chapter on Political Geography.

V.

HYDROGRAPHY OF THE COUNTRY.

RIVERS AND LAKES.

IN consequence of the mountainous character of the country, and of the rainfall distributed over the whole year, Japan naturally abounds in water. A denser network of rivers, streams, and shallow lakes, with the addition of numerous canals, such as are found, *e.g.* in the plain of Kuwantô, is scarcely conceivable. But the quantity of flowing water varies often and very considerably, especially in summer and autumn, and is greatest at this time, not merely because then the most plentiful rain-showers fall, but also because the gradual melting of mighty snowdrifts, which have collected in the mountains during the winter, affords a rich contribution which is not found in the cold season.

When in summer, during the high temperature of the prevailing south-west monsoon, long-continuing rain not unfrequently sets in with tropical violence, the water rushes through every mountain-valley, and the cheerful little mountain rivulet visibly swells into a mighty stream. With the roar of its hurrying and troubled flood is mingled the dull rolling thunder of detached masses of rock, which the waves carry away together with many of the lightly-built bridges and gangways. Further down the valley, indeed, even the carefully built, solid dams on both sides of the broad river-bed cannot always control the force of the great volumes of water and check their devastations. Inundations, like earthquakes, are amongst the most familiar and dreaded pests of the country.

When the rain is over, and the stream has returned to its modest little bed, the wide fields of pebbles on both sides, and innumerable mighty boulders in them, enable us to form an idea of the violence to which it has often and not long since attained. As far as these masses of boulders and pebbles extend, is the upper course of the stream; where, on the other hand, the fall is notably diminished, and we find instead deposits of sand, its lower course begins. The boulders are principally employed in the construction of the dams.

This abundance of water lends a peculiar charm to the magnificent woodlands of the Japanese mountains. The streams, abounding in trout, carry their clear waters in many windings, now past mighty masses of rock, which here and there divide the stream, and are very frequently adorned with a few lovely shrubs, but

chiefly with ferns and the red flowers of small azalea bushes, vividly recalling our Alpine roses; now spreading themselves out over broad fields of pebbles, now hemmed into a narrow, rocky ravine, and overshadowed by the shrubs and foliage of the banks, here finding its hurried course over rocks and covered with foam, there slowly winding round a projecting cliff, which seems to detain the stream, and where it has worn out a deep bed in which we are delighted by the clearest blue-green waters.

The Japanese Islands are too small and too narrow for the development of great river systems to be possible. But although the most considerable rivers drain areas of barely 6,000 to 8,000 square miles, and the length of their course can only be compared with that of the Main, besides that in their lower course numerous canals carry off a portion of their water to the rice plains, yet they are of great importance for internal communication, chiefly in consequence of the numerous mountains and the want of good roads.

The very varying quantity of water, the constantly changing sandbanks in the lower course, and the bars at the mouths of many of them, do not admit of vessels with much draught; but a very active traffic in flat-bottomed boats is carried on in many of them in spite of the above hindrances, and these water-ways are used down stream in many cases, where with us neither boatman nor passengers would venture to enter a boat.

Such Japanese river-boats, especially those which are employed in crossing the small river-rapids, are long and narrow as compared with sea-boats, usually 7 ken (12 metres) long and $1\frac{1}{3}$ metre broad. They are propelled by one man sculling at the stern, whilst another is pulling at the bow with a short-bladed oar passing through a loop of Wistaria or Katsura. They have to be directed now through rapids in a narrow rocky bed, now over sandy shallows or boulders in a broad bed, and what European, who has experienced all the hindrances and dangers of a voyage on Japanese mountain streams, has not admired the great care and coolness, the keen glance, and strong, sure arm with which his boatman has carried them safely past them without even wetting his garments.

In Old Japan the Tone-gawa, the Shinano-gawa, and the Kiso-gawa rank as Sandai-ka, *i.e.* "the three great rivers."

1. The Tone-gawa waters with the Sumida-gawa the plain of Kuwantô (plain of Yedo). It rises on Monjiu-san in Tone-gori (Tone district), in the province of Kôtsuke, and empties itself after an essentially south-eastern course of some 170 miles at Chôshiguchi on the Pacific, and in a second arm near Horiye Shindén into the Bay of Yedo. Not far from its left bank lies, still in Tone-gori, the town of Numata. A few miles below it the Tone receives an important accession from the west in the Agatsuma-gawa, which, from its origin in Adzuma-yama, is also called the Adzuma-gawa.

Here begins with the plain of Kuwantô the lower course of the river. Soon it divides itself at the famous silk town of Mayebashi into a whole network of water-courses which later re-unite, upon which it gives up its previously mainly southern direction and turns now to the east. This happens principally where, on the right, near Goriô, it receives the Karasu-gawa coming from Takasaki, and which above Yodo has been increased by the Kana-gawa; along it runs the boundary between Musashi and Kotsuke, which afterwards runs along the Tone until near the mouth of the Watarase-gawa, almost due north of Tôkiô. This more considerable tributary of the Tone comes down the north-west from the provinces of Shimotsuke, where it collects the drainage of the east side of the Akagane mountains. The Ôshiu-kaidô (north-land road) lies to the east of it and its mouth. It crosses near Kurihashi, by a ferry, the bed of the Tone, there 214 ken (400 metres) broad. Lower down, near Sekiyado, the Tone splits up; the right arm turns southwards, forms the boundary between Musashi and Shimosa, and flows under the name of the Yedo-gawa to the east of Tôkiô into Yedo Bay, while the left arm keeps the former direction of the stream. It is called Naka-tone-gawa (middle Tone-gawa) in opposition to the Kami-tone-gawa (upper Tone-gawa) above Kurihashi. Soon it is notably increased by the Kinu-gawa coming from the Sannôtôge on the border of Aidzu, and which receives amongst other accessories the Daiya-gawa from Nikkô. Soon after it also receives the outflow of numerous shallow lakes, especially of Tega-numa, Imba-numa, and Naga-numa in Shimosa, of O-ura, Kasumiga-ura, and Nishi-ura in Hitachi, and then pours itself at Chôshi into the Pacific.

At the mouth of both branches of the Tone-gawa are found far projecting alluvial land with sand-bars.

The Sumida-gawa, already mentioned as the second river of the Yedo plain, is little more than half as long as the Tone-gawa. Its sources lie in the north-west of Tôkiô on the border of Musashi and Kai, its mouth is below Tôkiô, through the most eastern part of which it flows. Various arms (canals) connect it with the Kami-tone-gawa and the Yedo-gawa. The Naka-gawa, which flows into Yedo Bay between the two, forms a connecting link.

Of the smaller rivers which justly belong also to the plain of Kuwantô may be mentioned: the Tama-gawa from Tenmoku-san in Kai, which empties itself below Kawasaki between Tôkiô and Yokohama; the Naka-gawa from Nasuga-take in Shimotsuke, which flows eastward of Mito into the Pacific, after it has received from the south the outflow of two marshy lakes, Kare-numa and Chiba-numa; finally the Kugi-gawa to the north of the one last mentioned.

2. The Shinano-gawa is the most important of the Sandai-ka. It has its source on Kimpuzan, flows under the name of the Chikuma-gawa through the eastern portion of the province of

Shinano, in which it receives the Sai-gawa, but not before it has already changed its previously north-western direction for a northward direction. Soon it enters, closed in by mountains, into the province of Echigo in which it first receives the name Shinano river. After it has been reinforced by considerable rivers from the right it flows to the right of Nii-gata into the Japanese Sea. Its course extends to some 130 ri or 320 miles. Towards the mouth its bed broadens out in the sand of the dunes and has formed a bar, over which the water is only 6 feet deep. According to the calculations of a Dutch engineer (Lindo) at the season when the water is lowest it discharges here into the sea 340 cubic metres of water per second, but in the rainy season 566 cubic metres. Until about 8 miles up stream the breadth varies between 1,250 and 300 metres, and the depth between 6 and $\frac{1}{2}$ metres. As the watershed on the right runs over the considerable eastern border range of Echigo and numerous small tributaries from it bring fresh supplies of sand with every heavy rainfall, an artificial deepening of the bed would be labour thrown away. The Chikuma-gawa or upper course of the river lies mostly through Hara or woodland, and has in places cut its bed deep into grey lava and masses of ashes. Only in its lower course, before it receives the Sai-gawa, does the valley expand into a considerable inhabited plain, called Tako-tani, a view of which is commanded from the higher-lying Zenkoji on the west. The towns of Komoro and Uyeda, past which the Hokkoku-kaidô runs from Oiwake, lie at some distance from its right bank. The Nakasendô crosses it near Shionada about midway between its sources and the mouth of the Sai-gawa 32 ri (80 miles) lower. This is its most important tributary and is full of water throughout the year. It draws nearly all its water from the east side of the Shinano-Hida mountains and carries them northward to the left bank of the Chikuma-gawa. The Torii-tôge, lying almost in the middle between Tôkio and Kiôto in Nakasendô, divides its system from that of the Kiso-gawa. From here to the station Seba the road just mentioned runs along the lovely upper valley of the river, and then the two separate; the Sai-gawa runs northward by the town of Matsumoto, reinforced by many considerable tributaries.

The lower course of the Shinano-gawa runs through the fertile plain of Echigo. Here it receives on the right near Kawaguchi its second longest tributary, the Uwono-gawa, which rises on the boundary of Echigo and Kotsuke in Eboshiga-take.

Six ri to the north of Nii-gata it is joined near the little town of Matsugasaki by the Agano-gawa, which has much less water than the Shinano river and is only navigable for 12 ri (30 miles) up the stream. It is connected near the coast with the Shinano-gawa by the Shin-kawa and further inland by the Kua-gawa. It carries to the sea the drainage of the fertile Aidzu-taira, which pours from the mountains around it.

The most distant sources lie near the boundary of Shimotsuke and Kotsuke where the mountains of Nikkô and their branches form the watershed between the Pacific and the Japanese Sea. At Sannô-tôge rises the Aidzu river or Ô-kawa and takes its way northwards through the midst of the Aidzu-taira, and at a greater distance westward of Wakamatsu. Constantly reinforced by supplies of water from right and left, it finally receives from the right the Dojima-gawa, which brings it from the east the water of the Inawashiro Lake and several considerable streams, and then turns towards the north-west. Soon it receives from the left the Tadami-gawa, which surpasses it in length of course. This is the outflow of the Ose-numa on the north-west side of the mountains of Nikkô and not far from the basin of the Tone, which later unites with a second considerable stream on the east side of Akayasu-yama. Near the town of Tsu-gawa the Ô-kawa changes its name. Five miles further, crossing the border-mountains of Echigo, and forming here, where it is enclosed by precipitous cliffs, a number of rapids, through which nevertheless boats from Tsu-gawa are guided, so that the journey of 18 ri (45 miles) to Niigata is made in one day by water, which otherwise would take at least twice as long. Soon after entering the province of Echigo the Tsu-gawa assumes the name Agano-gawa and sends out an arm on the right towards the north-west, which in its lower course is connected by canals, not only in the main stream but also with the Ara-kawa, which flows into the sea further to the north. In the basin of the lower Shinano-gawa and Agano-gawa are found also a number of shallow fresh-water lakes, as Fukushima-gata, Yora-gata, Toyano-gata, and several others.

In southern Echigo must be mentioned the Seki-gawa, on which Takata lies, and which flows into the sea a few ri further north, near Imamachi and Kuroi. This river is the outlet of the Lake of Nojiri. Finally, too, still further south, the Hime-gawa, which rises in Shinano on the east side of the Snow Mountains and turns northwards past the little town of Itoyegawa, formerly a Daimio seat, to the Japanese Sea.

3. The third of the Sandai-ka, the Kiso-gawa, rises, as has already been intimated, not far from Saigawa and the Torii-tôge in Shinano. The Nakasendô runs along the left side of the charming valley which here forms its course in a south-westerly direction, then, after passing into the province of Mino, its bed widens and deepens by taking up some considerable tributaries from the right. Among them in particular may be mentioned:—

The Hida-gawa. This is called in Hida the Masuda-gawa, and has its sources in a great marsh on Norikura in the Snow Range, whence it takes a south-easterly course and flows into the Kiso-gawa in Mino near Ota, shortly before the Nakasendô passes over permanently from the left bank of the Kiso-gawa to the right. Here begins the lower course of the main river, and the richly-

watered, exceedingly fertile alluvial plain of Mino, Owari, and portions of the province of Ise.

The Gujo-gawa is formed in Hachiman from the junction of the Kaminoho-gawa, which rises above Shirotori on Dainichi-gatake and of the Miyogata-gawa coming from the borders of Hida on the east. From Hachiman the Gujo-gawa has an essentially parallel course with the Hida river. After being reinforced by the Makida-gawa on the right, and other streams, it flows to the directly past the towns of Kodzuki and Gifu, where it becomes navigable, to the Mino plain.

The Roku-gawa, which rises in the north-western corner of Mino on the borders of Echizen, follows generally a southerly direction, and in its lower course approaches so near to the Gujo-gawa, that here various, partly artificial partly natural, channels are found between them.

Soon after receiving the Hida river, the Kiso-gawa forms, in a bend directed towards the north-west, the boundary between Mino and Owari, and then turning southwards, between the latter and Ise, where it also, near the town of Kuwana, flows into the Ise-nomi, forming a delta.

The second, much smaller river of Owari, whose mouth lies somewhat more to the east, is chiefly noteworthy, because at some distance from its left bank extends the industrial town of Nagoya, which may be reached by boat.

The most important rivers of the island of Honshiu, besides the Sandai-ka, the Sumida-gawa, and the Agano-gawa, are:—

a. On the side of the Pacific: the Kitakami-gawa, Abukuma-gawa, Fuji-kawa, Tenriu-gawa and Yodo-gawa.

b. On the side of the Japanese Sea: Mogami-gawa, and Omo-gawa.

The Kitakami-gawa rises north of the 40th parallel and flows in a meandering course of 73 ri (180 miles) towards the south, when in $38^{\circ} 26'$ N. and $141^{\circ} 15'$ E. it reaches Sendai Bay near the little town of Ishinomaki. With its source is associated the legend of Hachiman-Taro-Yoshiie, a famous hero, who was sent from Kiôto against the Yezo or Ainos. "His army was perishing of thirst, and he prayed to the gods for help, struck with his spear upon a rock, and there flowed forth water in plenty, and became the source of the great Kitakami-gawa."

The valley of the Kitakami presents very lovely landscapes, is plentifully watered, and is one of the most fertile in the north of the country. Towards the west the eye falls upon the summits, long covered with snow, of the Central Chain and the volcanic mountains in front of it; towards the east, upon the heights of the watershed between the river and the Pacific. On the border of Sendai and Nambu, near Ishinoseki on the Ôshiu-kaidô, the mountains approach the Kitakami on both sides and for a long distance hem in its valley; then, after it has become somewhat

broader again, about four ri ($9\frac{1}{2}$ geog. miles) north of Ishino-maki, a bifurcation of the river takes place, one arm turning eastward under the name of the Oiba-gawa and flowing direct into the Pacific. Among the numerous tributaries of the Kitakami, most, and those the best supplied with water, come from the central mountain-range on the right. The most important place in its basin is Morioka, the chief town of Nambu (Iwade-ken) on the left bank, to which point the Ôshiu-kaidô keeps along the right bank from Sendai, and where its navigability begins, which is of great importance for traffic. Thus, *e.g.* all the copper from the famous mine of Osarisawa near Kadzuno, 24 ri (60 miles) north-west of Morioka, is sent on from here in boats.

To the west of the Kitakami near Nobiru, a little river, the Naruse-gawa, flows into Sendai Bay. Its valley forms the southern margin of the lower plain of the Kitakami, which is separated from the great fertile plain of Sendai towards the south by a broad flat ridge of land, the highest parts of which are covered by underwood and pines, while rice culture has to confine itself to the narrow valleys.

The plain of Sendai, named after the largest town of Northern Nippon, which lies on the right bank of the little Shoshi-gawa, four ri ($9\frac{1}{2}$ Engl. miles) from the coast produces rice and hemp in great abundance. Various coast streams, and in the southern part the great Abukuma-gawa, supply it with water.

Some 45 ri (112 miles) northward of Tôkio, where a chain of heights running from the central chain towards the east shuts off the Kuwantô and offers a last glance backward to the distant Fuji, there rises in Ôkuma-take and Asahi-dake, near the borders of Aidzu, Shimotsuke and Iwaki, the Abukuma. The Ôshiu-kaidô crosses it near the town of Shirakawa, 50 ri (125 miles) from the capital of the country, and then continues upon its left bank. To this point its course has been towards the east; it now turns towards the north, finally towards the east again, when it flows into the sea beyond the 38th degree of latitude, near Arahama. Here and for many miles upward it has a breadth of 180-250 metres, but no great depth. On its left bank lies, in a silk-producing district 70 ri (170 miles) north of Tokio, the considerable town of Fukushima.

The Fuji-kawa is formed out of the union of the Fuyefuki-gawa with the Kamanashi-gawa. With these streams, of which the Fuyefuki-gawa had previously been reinforced by the Arai-kawa and Nik-kawa, it enters the plain of Kôshiu and embraces in a wide bend on its north and west sides Fuji-no-yama. Its waters it draws from the high boundary mountains of the province of Kai and discharges them in Tô-kaidô near Yui into the Suruga-nada. As in the lower course of the river the mountains between Suruga and Kai hem in its valley, and it hastens with a considerable fall towards the coast, the wide bed of boulders is found here again,

which marks its upper course south of Yatsuga-take, and renders it unfit for navigation.

The largest river along the Tô-kaidô besides the Kiso-gawa is the Tenriu-gawa. Its sources lie in the Lake of Suwa in Shinano, which is situated in Naka-sendô between the basins of the Chikuma and Saiga-gawa. In Suwa-ko is collected the water of the torrents from the south-west side of Wata-tôge, Tateshina-yama and other mountains and flows away then towards the south-west as the Tenriu-gawa. This flows at some distance past the towns of Takatô (left) and Iida (right) through south-west Shinano, passes then into Tôtômi and flows, after a course of about 55 ri (135 miles), between Mitsuke and Hamamatsu, forming a delta. The larger arm is crossed by the Tô-kaidô on a wooden bridge 153 ken (280 metres) in length; the whole boulder-bed, however, is 710 ken (1,710 metres) broad, and indicates granite and old schistose mountains as its origin.

The Yodo-gawa forms an easy connecting link between the two western chief towns, Kiôto and Ôsaka. It is the outflow of the great Biwa Lake, begins below Ôtsu, and flows in a south-westerly direction to Ôsaka Bay in the Idzumi-nada. It takes its name from the little town of Yodo lying on its left bank, and on the right bank of the Kidzu-gawa, which here discharges itself. Higher up it is called Uji-gawa, from Uji-gori, the celebrated tea-district of the province of Yama-shiro, which it traverses. Here on its right bank, only an hour above Yodo, lies the town of Fushimi, a suburb of Kiôto, and opposite to it the extensive marsh, Sawada.

Despite the shallowness of the river, and the frequent interruption of the navigation by sand-banks, a lively traffic is nevertheless carried on with Ôsaka by means of flat steam and other boats down to its mouth. The importance of this means of communication has much diminished since Ôsaka has been connected with Kiôto by rail. Numerous canals and arms of the Yodo-gawa traverse the fertile plains about its lower course, and Ôsaka with its many bridges, where the name Uji-gawa occurs again, attached to one of the arms.

The most important tributary on the left is the already mentioned Kidsu-gawa from the south-east, which brings to the Yodo-gawa its sand and mud. It is called in its upper course, where it collects the streams of Iga, the chief habitat of the giant salamander, Koto-gawa.

Opposite Yodo, and below Fushimi, the Katsura-gawa empties itself. It comes from the north from Tamba, flows past the west side of Kiôto, and then, near Fushimi, receives the Kamo-gawa, which runs through the eastern portion of Kiôto.

The Mogami-gawa is a broad but shallow river, which carries the drainage of the province of Uzen past the left side of the town of Sakata to the Japanese Sea, and has its springs on the borders of Aidzu. It comes from Adzuma-yama, and is called in its upper

course, where it traverses the plain of Yonezawa, Matsu-kawa. After entering the greater plain of Yamagata it changes its name, and at the same time gradually alters its previous northerly direction into a westerly one.

The Toshima-gawa is called in its upper course Omono-gawa, rises on the borders of Uzen and Ugo, traverses the latter in a north-westerly direction, and falls below Akita into the Japanese Sea. On the right side it receives from the north the Katsu-kawa, which is called in its lower course Kami-gawa, and into which the mountain-lake Tako-gata also drains itself.

In addition to the larger rivers of the island of Honshiu already mentioned, we may add here the names of a few others.

There flow into the Japanese Sea :—

The Ihaki, or Hirosaki-gawa, in whose valley Hirosaki lies, through Mutsu to the Jûsa-gata in the north. The Noshiro-gawa, in northern Akita, which rises in north-western Nambu, has first a northerly then a westerly course, and in its upper course is called Yone-tsuru-gawa. Further south comes the Toshima-gawa (called in its upper course Omono-gawa, right tributary, the Katsu-gawa), then the Mogami-gawa; and then in Echigo the Ara-kawa, Agano-gawa, Shinano-gawa, Seki-gawa, and Hime-gawa. Further south-west, in the province of Echû, come the Kurobe-gawa, then the Jindzû-gawa and Shira-gawa. The Kurobe-gawa comes from the interior of the Snow Mountains, where Hida, Echû, and Shinano touch each other. The Jindzû-gawa traverses the southern part of the town of To-yama, and debouches 2 ri below it. It rises in Hida, whose chief town, Takayama, lies in its basin, and bears here the name Miya-gawa. Before passing into Echû it receives, on the right, the Takahara-gawa, which comes from Yariga-take, and has a great waterfall here, near the town of Hirayu. From Haku-san rises the Shira-kawa, turns northward through western Hida, and empties itself near Takaoka in Echû. In the province of Kaga, the Tetori-gawa, also coming from Haku-san, discharges itself; in Echizen, near Mikuni, the considerable Funabashi-gawa, on whose right tributary, the Ikeda, spreads the town of Fukui.

In Chiugoku, or the central provinces (San-indô and San-yodô), there are few rivers of any size. As the watershed between the Japanese and the Inland Seas runs nearer to the latter, most of the more considerable streams, several of which are navigable for a good many miles, run into the latter. Amongst them are the Ichikawa in Harima, on whose right bank, not far from its mouth, Himeji lies; the Yoshii-gawa, and the Okayama-gawa in Bizen. Both come from Mimasaka, and are of considerable size. The Yoshii-gawa is called in its upper course Nakasu-gawa, comes from the borders of Hôki and Inaba, is 29 ri (72 miles) long, and navigable for 18 ri (45 miles). Even its left tributary, the Watari-no-gawa, in Mimasaka, is navigable for some distance. The river falls not far from Saidaiji into the Inland Sea. On the

Okayama-gawa, which in Mimasaka is called Nishi-gawa (West River), lie the towns of Katsuyama, and Okayama. The province of Bitchiu is watered by the Kawabe-gawa and its tributaries, and Bingo by the Tôjô-gawa. The most important river in Aki, on which is also built the chief town Hiroshima, is called the Koya-gawa; in Suwo, the most considerable river is called the Iwakuni-gawa, after the chief town upon it; and in Nagato, the largest river is the Yoshida-gawa. Into the Japanese Sea flow:—The Takasumi-gawa and the Yeno-gawa from Iwami, the Ichiri-gawa into the Shindji-no-midzu in Idzumo, the Hine-gawa in Hôki, the Karu-gawa in Inaba, and the Toyaoka-gawa in Tajima.

On the east side of the Inland Sea, between the towns Osaka and Sakai, the Yamato-gawa discharges itself, which forms in its lower course the boundary between Setsu and Idzumi; also the Yoshino-gawa, which rises in the Odaiga-hara in Yamato, flows westward past Yoshino, and empties itself below Wakayama in Kii, of which it is the most important river.

Among the rivers which pour themselves directly into the Pacific, besides those previously mentioned, the most important are the following:—the Otonasi-gawa in Kii, which also comes from Yamato, and on whose left bank, near its mouth, lies the town of Shingu; the Miya-gawa in southern Ise, which rises in the Odaiga-hara, and flows in an easterly direction, passing not far from Yamada to the sea; the Fujiwara-gawa and the Kusida-gawa, two arms near the mouth of the Kawata-gawa, a magnificent river, which also takes in the main an easterly course from the borders of Yamato through Ise. A number of smaller streams are then followed by the Kiso-gawa. Among the rivers which besides this, the Tenriu, Fuji, and Tama are crossed by the Tô-kaidô, the most important are the Yahagi in Mikawa, the Oi on the borders of Tôtômi and Suruga, the Numa near Numadzu, and the Baniu in Sagami.

The most considerable river of the island of Shikoku is called the Yoshino-gawa. Its basin lies in Tosa and Iyo, from whence it flows in a very winding course with a mainly easterly direction through the province of Awa, and empties itself below its chief town, Tokushima, forming a delta in the Linschoten Straits. On its south side is the mouth of the smaller Naga-gawa, which runs tolerably parallel with it. The rivers Miyodo and Tsuno, emptying themselves on the coast of Tosa, have a south-easterly course; the former rises on Ishidzuchi-san and ends below Ino, 3 ri south-west of Kochi. On the lower course of the larger Tsuno-gawa lies the town of Nakamura. Both rivers come from Iyo, and strike through the border range in narrow, winding, and beautiful valleys, but become navigable for boats as soon as they leave it.

Of the rivers of the island of Kiushiu deserve mention:—the Chikugo, which has its sources in eastern Higo and in Bungo, flows in a northward bend through the northern portion of the province of Chikugo, finally forming the boundary between it and Hizen,

and falling into Shimabara Bay. Further south the fertile province of Higo is watered by the Takase, Shira, and Kuma, and then comes the Sendai-gawa in Satsuma. On the east side of the island the chief rivers are :—the Oyodo-gawa, Se-gawa, Gogase-gawa. The Oyodo-gawa,—which draws its waters from the mountain of Kirishima-yama and the south of it, and empties itself 1 ri below the town of Miyasaki, lying on its left bank,—is called higher up, near the little town of Takaoka, Akaye-gawa. Below Sadowara, the most important town of Hiuga, the Se-gawa discharges itself, and below Nobeoka, the much larger Gogase-gawa.

In the north of Kiushiu, empties itself, $2\frac{1}{2}$ ri eastward of Funai, the Shirataki-gawa, the principal river of Bungo.

The most considerable rivers of the island of Yezo are the Ishikari, Teshio, Tokachi, and Tokoro. Their basin of origin lies in the most mountainous part of the island, between $43^{\circ} 40'$ N. and 44° N. and about 143° E. long., and they run in different directions to the Japanese and Okhotsk Seas, as well as to the Pacific. By far the largest and most important of them, with the broadest and most cultivable valley, is the Ishikari. In length and drainage basin it may be compared with the Thames; but its quantity of water is much greater. Its sources lie in the Ishikari-yama, $43^{\circ} 40'$ N. and $143^{\circ} 20'$ E. from whence it takes, amidst innumerable windings, a generally south-western direction; and after a course of about 112 ri (275 miles) falls near the little town of Ishikari into Otarunai Bay (Gulf of Strogonoff) in the Sea of Japan. Here and a good many miles upward, it is between 200 and 280 metres wide, and over the bar, according to the season, from 2 to 4 metres deep. It traverses a beautiful park-like plain, called Kami-kawa, then passes through the ravine Kamoyé-Kotan in a succession of small rapids, after which its valley widens into a second alluvial plain, in which to the left, on its left tributary, the Toyohira, and 7 miles from itself, is situated the chief town, Sapporo. During the first 28 miles it runs with a considerable fall through a series of basaltic or trachytic ravines, whose sides are often perpendicular and of imposing height. The bed is here scattered with masses of rock which produce numerous rapids; afterwards the ground becomes flatter, the valley broader, though the meandering turns continue and for 30 to 40 miles keep various accompaniments from the mountains, such as birches, rhododendrons, and other trees which are not found in the lower course. Then follows the upper plain, through which the river, reinforced by considerable tributaries, cuts out its winding bed, and in which, as also further down, floating wood frequently blocks its course and causes variations of it. This plain is 40 to 50 miles long, and half as broad. Grassy tracts abounding in flowers interchange with the willow, maple, and ash-trees accompanying the banks, as well as in places with walnut-trees, oaks, and elms. This plain is bounded on three sides by wooded mountain-ranges; and the autumn visitor is enchanted by their glory of

colour, by the clear sky and profound peace which are so characteristic of this landscape at that season. For a few dozen Ainos are as yet the only inhabitants of this district, so that the deep stillness which prevails in it is broken only by the murmuring of a distant rapid or by the cries of birds and wild animals. In Camoye-Kotan (Dwelling of the gods) occur diorite, serpentine, and old schists on both sides of the river, hemming in its course considerably for four or five miles and producing many rapids. Soon, however, the river enters the plain of Sapporo and is now a considerable stream, which quietly describes its serpentine windings through the alluvial plain, and in which an active traffic may be carried on, if this district ever undergoes a rational exploitation; for hitherto the Ishikari has only been of importance for its salmon fishery, which is carried on each autumn in and about its mouth. Its most considerable tributary in the Sapporo plain is the Ebetsu or Chitose, which, with its right-arm tributary, the Yubari-betsu, also carries to it the water of three lakes.

Further northward the Teshio ends its course near the 45th parallel in the Japano-Tartarian Sea. It traverses in a north-westerly direction the province named after it. The opposite direction is taken by the Tokachi-gawa, which rises in Tokachi-ga-take not far from the basin of the Ishikari, and flows south-west to the Pacific Ocean, into which it falls near Otsuma-mura.

Less important than the three previously-named rivers of the island of Yeso, is the Tokoro, which flows eastward through Kitami and falls into the Okhotsk Sea.

The larger standing waters of Japan are confined to the two great northern islands and partly occupy shallow alluvial depressions in the larger river valleys, partly are true mountain tarns, and as such are generally enclosed by a wall of volcanic mountains, though they are by no means old craters. We have as yet no exact information as to the lakes of the island of Yezo. Besides the Ô-numa in the north-east of Hakodate, which is only an extensive marsh, we do not know even their names. A number of the lakes of Honshiu, amongst them the most considerable, lie in a line which is equidistant from the Pacific and the Sea of Japan. These are Lakes Biwa, Suwa, Chiuzenji, Inawashiro, Takogata, and Towada. Nearer the east coast we find the lakes at the foot of Fuji-san, the Hakone Lake and the coast-lakes in the lower course of the Tone-gawa; near the coast of the Sea of Japan are the Shindji-no-midzu and the Katas in Echigo.

The Biwa-ko, or Omi-no-kosui, is the largest and most interesting lake in Japan. It extends in the middle of the province of Omi, and between the bays of Wakasa, Ôsaka, and Owari, for about 36 miles in length from north-east to south-west, where it is very considerably narrowed and empties itself below Otsu as the Uji-gawa. In size it is nearly equal to the Lake of Geneva. The surface of its beautiful green water lies about 100 metres above

that of the sea : the greatest depth is said to be nearly 100 metres, but in most places it is much less. Numerous towns and villages and well-cultivated fields extend around it ; gradually rising in many places into wooded mountains. A couple of small rocky islets emerge from it, inhabited by cormorants and gulls intent upon catching fish. Sailingboats and steamboats cross it and carry on intercourse between Otsu, Hikone, Nagahama and other places on its banks. According to an old legend, the lake sprang up in a night at the same time with Fuji. Its environs form a district rich in history and legend. There are some distance away the long ridges of Hiye-san and Hira-yama on the west side, on the east Ibuki-yama with its wealth of plants, and at a greater distance the field of Sekigahara, where Iyeyasu in 1600 annihilated his foes in a momentous battle. But even close by the lake there are numerous remarkable points, as the white-painted castle of Hikone, which even at a distance is conspicuous on the south-eastern shore, and the celebrated pine of Karasaki (*Kara-saki-no-matsu*) close to the western ; the *Seto-no-karashi*, or the beautiful old bridge over the *Uji-gawa* and the bell of *Miidera* and many another object extremely fascinating to him who knows the legend associated with it as well as to the lover of nature and art.

If we follow the *Nakasendô* from Tôkiô and finally in Shinano reach its highest elevation, the *Wada-tôge*, we descry S. 20° W., a considerable lake-basin in a beautiful enclosed valley, and far to the east of it *Fuji-no-yama*. We have before us the *Suwa-ko*, the lake of the district of Suwa, in the province of Shinano. In its neighbourhood lie many places, amongst them the little towns of *Takashima* and *Shimonosuwa* ; through the latter runs the high road along which is the way eastward to *Kôshiu*. The *Suwa-ko* lies 800 metres high and is covered in January and February with a crust of ice more than a foot thick. The broad belt of *Potamogeton* and other water-plants on its flat shores indicates a slight depth ; and in fact we have to wade long through the muddy ground before we lose our footing on the side of *Shimonosuwa*. In several places in its vicinity occur warm springs, as in *Shimonosuwa*. Obviously this lake was earlier much more extensive, and once embraced also the beautiful rice-land which spreads on its western side. Its retirement may most simply be explained by a natural deepening of its outlet, the *Tenriu-gawa*.

The *Chiuzenji Lake*, or *Nikkô-no-kosui*, lies 1,340 metres high in the *Nikkô* mountains, and may be reached in a few hours from the famous temple-grove. It is a charming and peacefully retired piece of clear water with the loveliest surroundings. An extremely variegated forest covers the hills which enclose it, while on its east side *Nantai-san* rises to an imposing height. At its foot and on the shore of the lake runs the path to the sulphur springs of *Yumoto*, situated 3 *ri* further and several hundred metres higher. On the side of the road and close by the sea is a series of tea-sheds

which are only tenanted in summer, then on the other side succeed several priests' houses and temples. From one of them runs the path to the summit of Nantai-san, which may be used only with the permission of the high-priest in Nikkô. The Japanese exaggerate the dimensions of the lake, when they give its length from east to west as 3 ri, its breadth as 1 ri, and its depth as equal to the height of Nantai-san. That however it is of considerable depth may be inferred from its entire constitution and surroundings as well as from the circumstance that its surface, despite its great altitude, never freezes over. A Daimio of Mito has given it the name of Setsu-ro-ko, *i.e.* clear snow-water lake. Its drainage-stream, the Daiya-gawa, forms immediately after leaving the lake the Kegon-no-taki. In two leaps it rushes here 110 metres, in the midst of a forest-ravine, down over doleritic lavas. The Lake of Chiuzenji contains no fishes. This is said to be the case with the numerous smaller lakes and pools in the district of the Nikkô mountains.

Several of the rivers of Aidzu-taira are, as has been already pointed out, the drainage-streams of lakes, among which may be mentioned the Ose-numa, the Tsuru-numa, and above all the Inawashiro-no-kosui or Inonaë-ko. This considerable water-basin, named after a little town on its north side, covers about 2 square ri and lies 560 metres high, north-east of, and a few ri from, Wakamatsu. The mountains which surround the lake, which is deep and abounding in fish, are for the most part wooded and only 150 to 200 metres higher. Far above them towers on the north side Bantai-san. The lake is said not to be frozen over in winter. On the quartz sand on its western shore I found a little *Corbicula* in quantities, and on the upper course of its drainage-stream, the Dojima-gawa, the beautiful *Unio Dahuricus* of Schrenk.

To the east of Akita lies, not far from the station of Obonai, and on the north of the road leading over the Kunimi-tôge to Nambu and Morioka, the mountain-surrounded Tako-gata. It is said to measure 1 ri square, and is visible from several points on the way from Obonai to the pass. Arguing from its situation, this lake also has a considerable depth. Towada-numa in Mutsu, whose drainage river is the Ôsaka-gawa, which flows to the Pacific, lies on the east side of the central mountain range 400 metres high in an uninhabited district, surrounded by virgin forest, and is without fish.

Of the mountain lakes which are found nearer the east coast, that of Hakone or Tôgitsu-no-kosui, also called Ashi-ko, is the best known. The Tô-kaidô leads south-west from Yokohama along its southern shore. It is a clear, long piece of water about 10 miles square, and situated 740 metres high. Volcanic mountains, for the most part without wood, girdle it. On its east side rises Komagatake as the highest summit of the Hakone mountains, around which the stream that drains the lake, the Haya-gawa, flows in a bend. In its lower course this beautiful stream passes several of the well-known Hakone watering-places, and then falls below

Odawara into the sea. But the lake has also another artificial outfall, an old tunnel, through which a portion of its water is conducted to the south-west to irrigate the rice-fields of seventeen villages in the neighbouring Suruga.

Almost at the same height as the Hakone Lake lie the seven smaller lakes at the northern foot of Fuji-no-yama, among which Mikka-zuki, or Lake of Yamanaka, and Benten-ko, or Kawaguchi-no-kosui are the most important.

In the neighbourhood of the Sea of Japan lies the little mountain tarn Fuyô-ko on the Hokoku-kaidô between Takata and Zenkoji, 650 metres high, on the south-east side of the town of Nojiri, from which it is usually named. It occupies the deepest part of a tolerably broad valley of depression, is said to draw its water from three considerable springs in it, and in winter to be covered with a thick crust of ice, so that the dwellers by the lake can visit each other across its surface. Its outfall runs, under the name of the Seki-gawa, to the Sea of Japan.

The shallow shore-lakes in the lower course of the Tone-gawa, belonging to the provinces of Shimosa and Hitachi, have been already mentioned. Kasumiga-ura is the largest of them, and extends over nearly 40 square miles. It has a length of 10 ri (24·4 miles) and a greatest width of 7 ri (17·08 miles), flat wooded shores, and little depth. To the east of it Nishi-ura, only 1 ri broad, runs far to the north, and is divided from the sea by a tongue of land of the same breadth, but 13 ri long, called Shika-shima, or Stag Island.

To the coast-lakes on the Sea of Japan belong the Shindji-no-midzu in Idzumo, as well as the lakes in the lower district of the Shinano-gawa, especially Fukushima-gata. Further northward and inland lies, in Uzen, the marshy lake Ukishima-gata, and near the sea eastward of the station Shiogosi, the islet-covered Zoogata.

The account of the fresh waters of Japan would remain incomplete, if I did not mention also some of the celebrated waterfalls of the country—falls which may rival in height and the beauty of their surroundings the principal waterfalls of Europe. The water rushes, in nearly all of them, over walls of old crystalline or volcanic masses of rock. In speaking of Lake Chiuzenji we have already mentioned the fall which the Daiya makes below it, the lofty Kegon-no-taki. But the mountains of Nikkô abound in similar falls, though they may not be as high; and in a few hours may be seen, besides that mentioned, half-a-dozen formed by the left tributaries of the Daiya. I will here mention only one of them, Uramiga-taki, which precipitates itself down an overhanging wall of dolerite, and owes its name (from *ura*, under-side; *miru*, to see; *taki*, falls) to the circumstance that one can walk under it and observe it from this situation.

The most beautiful waterfalls of the country, however, are con-

sidered to be those of Nachi-no-taki on the south-east side of Kii, four or five miles from the little port Katsura. According to Capt. St. John, the water here falls 16 metres, then 23·25 metres, and finally from a height of 86 metres.

Also in the neighbourhood of Kobe are some very considerable falls, where streams rush down over perpendicular granite walls. The best-known of them, only half an hour north-east of the town, is called Nunobiki-no-taki (Fall of the hanging cotton stuff) and is 18·25 metres in height. Wonderful stories are current in Japan as to the height of the waterfalls, in Hida. Thus Taketani-no-taki at the source of the Takara-gawa in Yari-ga-take is said to be 660 metres high, and Shiromidzu-ga-taki on Haku-san 675 metres. Although these figures must be reduced by Europeans to a more modest scale, yet they testify to the considerable elevation of these natural phenomena, which have been for so long seen and measured by no foreigner.

VI.

CLIMATE.

A. ITS GENERAL CHARACTER. TEMPERATURE.

THE Japanese islands form the prolonged eastern member of the north-east monsoon region, in which are included the countries bordering on the Yellow and Japano-Tartaric sea, from Formosa and the Fokian Straits, onward to the mouth of the Amour. For the climate of this whole region is essentially regulated by the predominance of monsoons, warm, moist south winds in summer, cold, raw, north and north-west winds during autumn and winter.

In view of the considerable extension of the empire of Japan, and the great variety in its orographical constitution, there can of course be no question of a uniformity of climate, yet one common feature prevails over the whole district, and especially the four main islands. The meteorological phenomena of Japan reflect the climate of the neighbouring continent, inasmuch as they exhibit a moist hot summer and a long comparatively cold and clear winter. But the environment of sea, and especially its warm equatorial current, the Kuro-shiwo, and its western branch, the Tsushima current, produce a considerable mitigation of those continental extremes, and do not leave the monsoons an undivided sway. They produce in particular cooler summers and much milder winters, as well as more moisture all the year round, than falls to the lot of the countries on the west side of the Yellow Sea and the Sea of Japan. Nevertheless the climatic difference between summer and winter are very great even in Japan, and those who visit this country for the first time in winter after having left a few weeks before the mild shores of California in nearly the same latitude, or having perspired in the tropical rains of the coasts of Malacca, are not a little surprised by the low temperature and the raw north winds which prevail here at this season. Their ideas of the climate of a country where camellias blossom in winter in the open air, where bamboo-canes attain a height of 20 metres and a circumference of 45 centimetres, and where even a palm flourishes and in places the sugar-cane is cultivated, were undoubtedly different. Whatever they may have heard or read as to the great extremes in the continental climate of China and Siberia, they scarcely apply it to Japan. Taking its southern situation into account, they are rather inclined to think of the mild Mediterranean countries and

of a continual summer prevailing, at all events in particular parts of it. In fact, if the climate of Japan depended only upon the amount of sunshine, we could hardly understand how that of its capital Tôkiô could be so different from that of the island of Malta under the same latitude, or how it is possible that Nagasaki in winter sometimes has snow and ice, and an average temperature of only 6.3° C., while at Funchal in Madeira, which lies only a few minutes further south, the thermometer during the same time does not sink below 12° C., and on an average stands at 15 to 16° C.

All the Japanese mountains are covered with deep snow through the winter ; from many mountains it only completely disappears in particularly favourable summers ; and even the schist ridges of the island of Shikoku, rising only a little over 1,200 metres, though washed by the Kuro-shiwo and protected to some extent against the raw north winds by the mountains of the neighbouring Hondo, exhibit their white caps as late as April.

In the west of Yokohama is described, like a gigantic reversed fan, the majestic Fuji-no-yama, whose summit glows with a peach-bloom red when it is struck by the first rays of morning, or with a pure white, like a mighty sugar-loaf on a clear winter day, as the sun climbs higher. Much as it contrasts with the dark hue of the nearer hills with their covering of pine-woods, yet the whole aspect of the surrounding landscape is thoroughly wintry. The grass is greyish-brown and more withered than with us, the fruit-trees are stripped of their foliage, and the puddles of the rice-fields, the playground of wild ducks, geese, and snipe, are not unfrequently covered during the night with a crust of ice, which indeed, as a rule, cannot resist the warm rays of the noonday sun. Exceptionally, and at distant intervals, however, it happens in Yokohama and Tôkiô that this covering of ice remains for many long days on the shallow standing water, and by the repetition of nightly frosts acquires a considerable thickness. Thus it was in the middle of January 1878, when the foreigners were able to offer the natives the spectacle of skating, which they had never seen. On the 13th of January, in that abnormal winter, and following days, Hiogo, Kumamoto and other places in South Japan experienced such a snowstorm as had not happened for 70 years. In the province of Higo the snow was reported to have covered the level country 1.6 to 1.8 metre deep, and prevented communication for several days, and even in warm Satsuma nature had put on an unusually dense and lasting covering of white.

The changes of the monsoons do not entirely coincide with the equinoxes ; in particular, the greatest part of September is under the sway of the northern air-current, which at this period, for obvious reasons, has not yet the raw character which it assumes later in the proper winter months. The periods of transition between summer and winter are short in the north, and towards the south are more and more prolonged at the expense of the

winter. A generally bright sky and still more sufficiently mild and refreshing breezes, render autumn and spring everywhere the pleasantest seasons of the year. The summer is finally over when, in October in the temple-courts and groves the yellow *Ichō*-leaves (*Ginkgo*), nipped by the morning dews, fall slowly to the ground, and the leaves of the *Momiji* (*Acer polymorphum*) again show the scarlet tint with which they appeared in spring. It is the season of the rice-harvest and of the sowing of the winter crops. *Fuji-san* has already for weeks appeared in its new winter garment, and the highest summits also further north, such as *Iide-san*, *Chōkai-san*, *Ganju-san*, and *Iwaki-san*, receive their white caps as early as the beginning of October. A month later the mountains of the whole northern district are permanently covered in snow.

The transition into summer falls in April; for in March not only are night-frosts and light and passing falls of snow no unheard-of things, but the temperature is altogether so low still, that we cannot properly speak as yet of a re-awakening of nature.

The Japanese winter is accordingly a long one, and lasts in the middle portion of the country 5 to 6, in *Yezo* even 7 months, but it cannot be called severe; for even in *Hakodate* and at *Sapporo* in *Yezo* the thermometer is only exceptionally as low as -16° C., as may be further seen from the accompanying tables. In the seaside places, with the exception of the island of *Yezo*, frosty days, *i.e.* days on which, during 24 hours, the thermometer does not rise over 0° , are a great rarity and hardly occur at all south of lat. 36° .

Monsoons and sea-currents are, as has been already pointed out, in addition to insolation and the orographical constitution of the Japanese islands the important factors upon which the character of their climate principally depends. Though it is stable therefore in its main features, the weather of this district has otherwise by no means, year by year, the same normal course, but is subject to great variations, as may be easily understood from the various and in part inconsistent influences; and therefore only observations continued over many years, such as we at present pursue only for a few places, can enable us to establish reliable averages, even though we are not inclined to attribute to the periodical changes in the sun's disc so great an influence upon many terrestrial phenomena, as is maintained by the extreme advocates of the sun-spot theory.

As yet reliable observations of daily temperatures have been instituted only in a few places in Japan. These establish, however, the important fact that here, as in the rest of the north-east monsoon district, the period during which the temperature stands above the mean, is about two hours shorter than that during which it does not reach the mean point. In summer, namely, the minimum lies between 2 and 3 o'clock a.m., in winter towards 3 a.m., in spring about 4 a.m., and in autumn towards 5 o'clock; while the maximum almost the whole year through falls in the

time from 2.30 to 3 p.m. The mean daily variation is in general less than in most countries in the same latitude. How much this depends upon the amount of moisture in the atmosphere is shown by the following comparison of the mean temperatures in the several months at Yokohama.

| | Jan. | Feb. | Mar. | Apr. | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. | Year. |
|-----------------------|------|------|------|------|------|-------|-------|------|-------|------|------|------|-------|
| Mean daily Variation. | 10.5 | 7.6 | 7.4 | 7.8 | 7.6 | 6.3 | 5.1 | 7.2 | 6.2 | 7.8 | 7.7 | 7.3 | 7.4 |

Here, *e.g.*, the lesser variation in June, July, and September, corresponds rather with the greater amount of moisture in the air and the more abundant rainfall, than with the degree of general heat. The high minima of temperature, almost without exception, follow, as with us, clear days with a low degree of moisture in the air, such as are very common in winter during the prevalence of north winds. Not unfrequently the greatest difference between the warm day temperature and the cold of the night for a whole week occurs within 18 hours. But generally the monthly extremes, as compared with the monthly means, are very considerable, as sufficiently appears from the tables.

Only in the district of the camphor-tree, in the Gôtô Isl., in southern Kiushiu, and in Tosa, are winters with snowfall the exception and frosty nights infrequent. Yet even in Kagoshima, in lat. $31\frac{1}{2}^{\circ}$ N., the water in the inkstands freezes over pretty frequently during the winter, where indeed we have to take into account also the light, airy construction of the houses, and not far away, likewise on Kagoshima Bay, it is usual, even in April, to protect the young tobacco plants at night by roofs of straw against the excessive cooling of the ground. According to the observations at Tôkio the thermometer falls below zero an average of 67 nights during the year, in Sapporo 148, to which are added 35 frosty days. Their distribution over the several months is as follows:—

| | | Year. | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|----------|---------------|-------|------|------|------|-------|-----|------|------|------|-------|------|------|------|
| Tôkio. | Frosty Nights | 67 | 24 | 19 | 8 | — | — | — | — | — | — | — | 3 | 14 |
| Sapporo. | Frosty Nights | 148 | 30 | 28 | 27 | 12 | 2 | — | — | — | — | — | 21 | 30 |
| | Frosty Days | 35 | 12 | 13 | — | — | — | — | — | — | — | — | — | 10 |

Such a comparison presents at the same time a good idea of the length and persistence of the winter as it occurs in the island of Yezo.

To our observations upon the yearly course of the temperature in Japan we will prefix the following comparative table for a series of places in the north-east monsoon district.

COMPARATIVE TABLE

OF THE YEARLY COURSE OF TEMPERATURE IN JAPANESE TOWNS AND IN VARIOUS OTHER PLACES
IN THE NORTH-EAST MONSOON DISTRICT.

| Name of Station or Observation | Lat. N. | Long. E. f. Gr. | Years. | January | Febr. | March | April | May | June | July | Aug. | Sept. | Oct. | Novbr. | Decbr. | Year | Winter | Spring | Summer | Autumn |
|-----------------------------------|------------|--------------------|--------|---------|-------|-------|-------|------|------|------|------|-------|------|--------|--------|------|--------|--------|--------|--------|
| Nafa . . . | 26° 13' | 128° 44' | 2 | 16.1 | 15.7 | 17.9 | 20.4 | 24.1 | 26.3 | 28.6 | 27.7 | 27.0 | 25.5 | 21.0 | 18.3 | 22.4 | 16.7 | 20.8 | 27.5 | 24.5 |
| Nagasaki (De- shima) . . | 32° 44' | 129° 42' | 11 | 5.6 | 6.4 | 9.5 | 14.6 | 18.6 | 21.7 | 26.2 | 27.3 | 24.2 | 18.1 | 12.6 | 7.0 | 16.0 | 6.5 | 14.7 | 25.1 | 18.3 |
| Ôsaka . . . | 34° 20' | 135° 10' | 1 | 4.1 | 6.5 | 9.6 | 13.9 | 17.5 | 22.7 | 26.0 | 27.2 | 24.4 | 19.1 | 13.6 | 7.9 | 16.0 | 6.2 | 13.7 | 25.3 | 19.0 |
| Yokohama . | 35° 27' | 140° 45' | 9 | 4.1 | 4.9 | 8.0 | 13.2 | 17.4 | 20.6 | 23.3 | 25.6 | 21.6 | 16.2 | 10.8 | 6.2 | 14.3 | 5.1 | 12.9 | 23.2 | 16.2 |
| Tôkio . . . | 35° 41' | 139° 47' | 8 | 2.4 | 3.1 | 6.8 | 12.7 | 17.4 | 20.4 | 25.2 | 26.4 | 22.0 | 14.8 | 9.0 | 5.1 | 13.8 | 3.6 | 12.5 | 24.0 | 14.6 |
| Niigata . . | 37° 55' | 139° 10' | 3 | 0.9 | 0.9 | 4.5 | 11.6 | 16.1 | 20.6 | 25.6 | 26.4 | 21.9 | 16.0 | 9.4 | 4.1 | 13.1 | 1.9 | 10.8 | 24.0 | 15.8 |
| Hakodate . | 41° 46' | 140° 45' | 10 | 2.6 | 1.5 | 1.7 | 6.8 | 11.4 | 15.0 | 19.1 | 21.4 | 18.0 | 11.7 | 5.5 | 0.1 | 8.9 | — | 1.3 | 6.6 | 18.5 |
| Sapporo . . | 43° 04' | 141° 23' | 1 | 1.5 | 2.1 | 1.2 | 6.3 | 9.4 | 16.2 | 20.7 | 22.2 | 16.6 | 10.4 | 2.3 | 1.7 | 8.3 | — | 1.8 | 5.6 | 19.7 |
| Dui | 50° 50' | 142° 26' | 1 | 14.9 | 13.9 | 7.9 | 0.5 | 5.6 | 10.9 | 14.7 | 16.6 | 11.7 | 5.0 | — | 13.6 | 0.8 | 14.1 | — | 0.6 | 14.1 |
| Nikolajevsk . | 63° 58' | 140° 43' | 16 | 24.5 | 21.4 | 14.3 | 3.7 | 3.6 | 12.1 | 16.2 | 15.7 | 9.9 | 1.6 | 10.2 | 20.4 | 2.9 | 22.1 | 4.8 | 14.7 | 0.4 |
| Wladivostok | 43° 09' | 132° — | 3 | 16.0 | 11.0 | 3.8 | 3.5 | 8.5 | 13.6 | 18.7 | 19.8 | 15.1 | 8.5 | — | 10.5 | 3.7 | 12.8 | 2.7 | 17.4 | 7.4 |
| Pekin . . . | 39° 57' | 116° 29' | 23 | 4.6 | 1.4 | 5.1 | 13.8 | 19.8 | 24.3 | 26.1 | 24.6 | 20.1 | 12.5 | 3.8 | 2.4 | 11.8 | 2.8 | 12.9 | 25.0 | 12.1 |
| Tientsin . . | 39° 07' | 117° 11' | 1 | 3.9 | 0.4 | 5.0 | 12.2 | 19.4 | 23.9 | 27.7 | 25.6 | 22.1 | 14.7 | 4.1 | 1.0 | 12.6 | — | 1.1 | 12.2 | 25.7 |
| Shang-hai . | 31° 12' | 121° 20' | 13 | 3.5 | 4.4 | 8.4 | 13.0 | 18.6 | 22.7 | 28.1 | 27.0 | 23.0 | 17.3 | 10.7 | 5.7 | 15.2 | 4.5 | 13.3 | 25.9 | 17.0 |
| Foochow . . | 26° 03' | 119° 22' | 4 | — | — | — | 18.1 | 20.5 | 27.8 | 28.3 | 27.6 | 25.3 | 22.6 | 17.1 | 13.7 | — | — | — | 27.9 | 21.7 |
| Kelung . . . | 25° 20' | 121° 46' | 2 | 14.4 | 14.8 | 16.7 | 19.2 | 23.7 | 27.7 | 28.5 | 27.9 | 26.8 | 23.4 | 19.1 | 17.2 | 21.6 | 15.5 | 19.9 | 28.0 | 23.1 |

That Ôsaka, as we perceive from the table, although it lies $2\frac{1}{3}^{\circ}$ further north than Nagasaki, has not only the same mean yearly temperature of 16° C., but also a closely similar course of heat through the several months, is explained by its sheltered position. In the same way we must regard it as a result of situation that in Nagasaki the spring, and in Ôsaka the autumn, is somewhat warmer; for in the former place the monsoon changes are felt earlier than in the latter.

In a comparison of the temperatures of Yokohama and Tôkio with approximately equal yearly mean temperatures of $14\cdot3$ and $13\cdot8$ respectively, the greater influence of the sea asserts itself in the case of the former, rendering its winter milder, but the summer months cooler, despite the slight distance in point of space between the two towns.

In the case of Niigata it is surprising that the mean heat of the year there, $13\cdot1^{\circ}$, is only a little below that of Tôkio, and even in the several months the differences are not so great as we should expect from its more northerly situation and closer proximity to the continent. Obviously the Sea of Japan, the frequent overclouding of the sky, and the abundant snowfall during the winter, effect an important compensation, and explain why on the entire western coast-land of Japan we find no high degrees of cold, and the camellia and tea-shrub extend so far to the north. From the same causes even western and southern Yezo have a mild winter, in which a cold of -16° C. only seldom occurs.

If we compare with this the temperatures of the neighbouring coasts of the mainland there appear striking differences in favour of Japan. The southern portion of the latter is about 2° warmer than the Chinese coast in the same latitude, but between Sapporo on the west coast of Yezo and Wladiwostok in the same parallel the difference is still very considerable, and amounts to $5\cdot2^{\circ}$ in the year and as much as $20\cdot3^{\circ}$ for the three winter months. Then, too, the western coasts of Yezo and Saghalien are several degrees warmer than the eastern coasts. Here the ground, which has been frozen two feet deep, only thaws, according to Capt. St. John, at the end of May, and the snow only disappears entirely under the influence of the June sun. Besides this, frequent fogs weaken the influence of insolation on the ground during the brief summer, so that here any cultivation is for ever out of the question. The climate of Yezo and Saghalien is, in comparison with other parts of the world in the same latitude, very cold, and also that of Amurland; the remaining portions of the north-east monsoon district, however, has in winter *negative*, in summer *positive* thermal anomalies. In Japan Proper (Ôyashima) accordingly the winters are colder, but the summers warmer, than in other countries in the same latitude. The mean yearly temperature of Tôkio is $13\cdot8^{\circ}$ C. In winter the quicksilver in the thermometer falls exceptionally to -9° C., on the average to -5 to $-6\cdot5^{\circ}$ C., in summer rising to

35.5° C., so that the greatest amplitude reaches 44.3° C. Of these extremes, however, the degrees of cold mentioned occur barely once in five years, while the summer temperature also only exceptionally and on a few days exceeds 34° C. Of places in nearly the same latitude as Tōkio (35½° N.) Canea in Crete has a yearly mean of 18° C., Gibraltar 17.3° C.; on the other hand the isotherm of Yokohama runs through Bologna (44° 30' N.) and Marseilles (43° 18' N.). Very remarkable is the low winter temperature throughout Japan. It reaches in Tōkio 3.6° C. But even March and November indicate in 6.8° and 9° C. a very low mean temperature. The mean during the three summer months is 24° C., so that between summer and winter there prevails a difference of temperature of over 20°. Between the warmest month however, August with 26.4°, and January as the coldest with 2.4° C., there appears a difference of 24° C.; *i.e.* as great as in Prague and Pesth. Moreover the variations of the thermometer within a single month are often very great, particularly in March, when they reach on the average 24°, while the extreme maxima and minima, which occurred in the course of eight years' observations, exhibit a much greater difference still. Continuously hot weather only comes in towards the end of June and usually ceases towards the middle of September.

The extremes of yearly temperature vary very little in Niigata from those in Tōkio. If we compare with the temperatures of Niigata those of several places in the same latitude (38°) we find that the yearly mean for San Francisco is 13.5° C., for Athens 17.7° C., and for Palermo 19.5° C., or about 0.4 C. and 4.6 C. and 6.4° C. higher respectively. In Niigata, January and August, as the coldest and warmest months respectively, have mean temperatures of 0.9° C. and 26.4° C. In San Francisco, on the other hand, January has a temperature of 9.8° C., and September, on the other hand, as the warmest month, only 16.2° C. Thus in the latter case there prevails a marked sea climate, and in the former case an almost continental climate.

The isotherm of 8.9° C. connects Hakodate (41° 4' N.) with Berlin (52½° N.); the isothermal line of Hakodate with 18.5° C. runs however through Moscow and Munich, while it has with Breslau and Raykiavig the same isochimenal line of -1.3° C. The amplitude between the coldest monthly mean and the hottest with -2.6° C., and 21.4° C., or 24° C., is equal to that of Washington and Tiflis.

In the case of Nagasaki, 16° C. has been found to be the yearly mean, 6.5° the average temperature of the three winter months, and 25.1° for the summer, quantities which likewise vary very much from other places in the same latitude. Thus the isochimenal line for instance passes over Montpellier, lying about 11° farther north.

If we ask finally however for the causes of all these phenomena, we shall again be directed in the first instance to the sea-currents.

In the north-east monsoon district also the rule is confirmed that warm climates follow the equatorial sea-currents towards the poles, while cold climates accompany the polar waters on their way back towards the equator.

As a further result of the comparison of the particular data given in the above table, we might point out that the decrease of the mean summer heat is with increasing latitude much smaller than the increase of winter cold.

Finally, we see from the comparison that in almost all places on the continental side of our monsoon district the minimum of temperature falls into the first half of January, the maximum into the second half of July, while the east Asiatic series of islands show their temperature—minima at the end of January or beginning of February, and their maxima in the first half of August. For the sake of completeness we may compare here the Pacific coast of North America, and make room for a comparison drawn from a previous essay of the writer.*

COMPARATIVE TABLE.

| Place. | Position. | | Yearly mean Cels. | Hot-test Mnth | Temp. Cels. | Cold-test Mth. | Temp. Cels. | Difference Cels. |
|-----------------|-------------|---------|-------------------|---------------|-------------|----------------|-------------|------------------|
| | Long. Gr. | Lat. N. | | | | | | |
| Nikolajevsk . . | 140° 43' E. | 53° 58' | — 2° 9' | July | 16·2 | Jan. | —24·5 | 40·7° |
| Pekin | 116° 29' E. | 39° 57' | 11·8° | " | 26·1 | " | — 4·6 | 30·7° |
| Shang-hai . . | 121° 20' E. | 31° 12' | 15·2° | " | 28·1 | " | 3·5 | 31·6° |
| Hakodate . . | 140° 45' E. | 41° 46' | 8·9° | Aug. | 21·4 | " | — 2·6 | 24·0° |
| Niigata . . . | 139° 10' E. | 37° 55' | 13·1° | " | 26·6 | " | 0·0 | 26·6° |
| Tôkio | 139° 47' E. | 35° 41' | 13·8° | " | 26·4 | " | 2·4 | 24·0° |
| Sitka | 135° 35' W. | 57° 3' | 6·2° | " | 13·2 | " | 0·0 | 13·2° |
| Fort Vancouver | | | | | | | | |
| W. Ty. . . . | 122° 31' W. | 45° 45' | 11·0° | Sept. | 16·1 | " | 3·3 | 12·8° |
| San Francisco . | 122° 25' W. | 37° 48' | 13·5° | " | 16·2 | " | 9·8 | 6·4° |

We observe in this table the transition of the continental climate of Eastern Asia into the sea-climate of the Pacific Coast of North America, the decrease of the yearly amplitude of temperature, and finally, the postponement of the hottest season from July in East Asia to August in Japan and Sitka, and to September in Fort Vancouver and San Francisco. The greater capacity for heat in the sea as compared with the continent, brings it about that its maximal temperatures fall in August and September, and with these circumstances corresponds the cause of the summer heat on the American coast. The Japanese islands form, however, in all

* Die Strömungen im nördlichen Theile des Stillen Oceans und ihre Einflüsse auf Klima und Vegetation der benachbarten Küsten, ein Vortrag, gehalten am Jahresfeste der Senckenberg. naturf. Gesellschaft, 1876.

these things, as well as in their position, the transition from Eastern Asia to the west coast of America.

From the interior of Japan we have not as yet any meteorological observations, yet here, despite the slight width of the islands, the state of things in several districts must be entirely different, as especially in the highlying districts of Shinano and Hida. Not so much their elevation in themselves, as their high marginal mountains, produce a dry, bright atmosphere, and therefore a greater amount of cold in winter than is found in the rest of the country; with which the account of the natives agrees that, *e.g.* the Suwa-ko during this season is covered with thick ice, and the inhabitants carry on intercourse with each other over its surface.

B. ATMOSPHERIC PRESSURE AND WINDS.

Considering the prevailing dependency of atmospheric pressure upon temperature, the main features of the condition of the barometer may be inferred from what has been already said of temperature. The expansion of the air in summer, as compared with the higher pressure in winter, produces differences of 10 mm., while those for China in the same latitude are nine times as great. As with heat, so also with atmospheric pressure, the yearly variations in Japan are less than on the neighbouring continent.

In Tôkio, where the yearly mean is 761.6 mm. (according to Knipping it is reckoned at 761.1 mm.), this is exceeded in seven months and not attained in the remaining five (May to September). The highest average state of the barometer falls in January with 764.4 mm.; a second maximum is shown by October with 764.2 mm., while June with 758.3 mm. has the lowest state. We learn from this that besides temperature, other factors also, in particular the amount of moisture in the air, as well as the strength and direction of the prevailing air-current, here, as elsewhere, have an essential influence upon the state of the barometer, and that the yearly extremes do not correspond conversely to the maximum and minimum of temperature, any more than the daily extremes.

The yearly period of atmospheric pressure has a much more regular course in Nagasaki, where the highest atmospheric pressure of 766.5 mm. corresponds with the lowest state of the thermometer in January, but the lowest state of the barometer of 755.6 mm. to the highest atmospheric temperature in August, and the monthly means for the yearly atmospheric pressure indicate only *one* maximum and *one* minimum, which however deviate from the year's mean of likewise 761.6 mm., much more than at Tôkio.

In Hakodate, where the mean atmospheric pressure is 756.5 mm., the highest monthly pressure falls in March with 760.0 mm., the lowest with 752.7 mm. in July. This and the low average state present, however, nothing surprising. Analogous to the above-mentioned striking variations of temperature, the yearly oscillations of

air-pressure are also very considerable. The barometer frequently rises above 770·0 mm., sometimes even above 775·0 mm., and not seldom falls below 750·0 mm., without taking into account its condition in great storms. It not unfrequently presents the anomaly that it rises with the winds which bring rain, and for hours during the continuance of rain remains very high (765·0—770·0 mm.), and only sinks after the wind has changed and better weather set in.

As to the hourly course of atmospheric pressure we have a long series of observations only from De-shima (Nagasaki), showing that the daily minimum in autumn occurs at 4 o'clock in the afternoon, but otherwise at 5 o'clock in the afternoon. The first maximum occurs in summer at 2 o'clock, in spring at 6 o'clock, in winter at 9 o'clock, and in autumn at 10 o'clock in the forenoon.

The high barometer indications and low temperatures which characterize the winter in Japan, and which are accompanied by a generally bright sky, are determined, as has been previously indicated, by the predominance of cold northern winds. Their prevailing direction is by no means everywhere the same on the various coasts, and the designation "north-east monsoon" is not suitable except in the southern islands. During the winter months there blows at Wladiwostok and on the entire coast of the Asiatic continent opposite Japan for the most part a cold, violent and penetrating north and north-west wind. That the sea-currents around the Japanese islands in the further course of these winds must essentially influence their direction, that in particular the Sea of Japan must strongly deflect it, may safely be assumed. Accordingly we find that the prevailing winds in winter are in Hakodate N.W. and W. winds; in Niigata S., S.W., W. and N.W. winds; in Tôkio N. and N.E. winds; in Nagasaki N. and N.W. winds.

In Tôkio the north-east wind sometimes continues for a week, and brings with a high state of the barometer, beautiful clear weather with slight frost during the night. Rain usually follows its veering to the E. and S.E., but winds from this latter direction are not very common in winter.

Dust-storms such as so frequently afflict China in winter, very seldom occur in Japan.¹ Yet I experienced one in Tôkio on the 4th February, 1875. The thermometer had fallen in the night to $-6\frac{1}{2}^{\circ}$ C., and even during the day did not rise above $4\frac{1}{2}^{\circ}$ C., the weather-glass fell towards 11 o'clock a.m. to 743·4 mm. From the north blew a cold violent wind, the houses trembled under its impact, and objects on the walls vibrated as in a strong earthquake. After a drought of several weeks the light, loose dust from the fields and roads had been carried up to a considerable

¹ Pumpelly (see his "Across America and Asia," pp. 138, 139) witnessed a dust-storm at Nagasaki on the 31st March—1st April, 1863. There was a great dust-storm on the plain around Pekin, and a dust-fog at Shanghai, and as the wind at Nagasaki blew from the west, there is no doubt that it brought the dust over from China, a distance of about 700 miles.

height, so that although the sky appeared to be free from clouds, no trace of it could be seen, with the exception of a small vaguely-outlined ring about the sun. The sun itself appeared to be dethroned, and to swim like a yellowish-red ball in the sea of dust; its rays could not reach the earth, and threw no shadows. The earth itself seemed to be veiled in a dark mist, only that the grey of the dust-fog was mingled with a peculiar fiery yellow from the particles of dust illuminated from above.

The N. and W. winds which prevail in winter in the Sea of Japan blow here and on the whole coast with such violence that the west coast of Japan is avoided by ships at this time, and even the steam-boat communications, as *e.g.* between Niigata and Hakodate, are interrupted. Although they pass from Asia over the broad warmer sea, and here take up a good deal of moisture, yet along the Japanese coast they manifest themselves as raw penetrating winds with such effect that the inhabitants take special precautions against them such as are needed nowhere else in the country. Thus I saw between Akita and Niigata, in November, 1874, in many sea-side places the people busy preparing for the winter by putting up along the sea aspect of their houses, and at a distance of two to three feet from them, walls of framework, and filling up the interstices with brushwood, moss, etc.

From April or May until September blow warm southern winds. On the Sea of Japan they are chiefly south-west winds (south-west monsoons), but at Yokohama and all the places bordering on the Pacific, south winds predominate.

This summer monsoon does not prevail with at all the same strength and regularity as the cold northern winds of winter. Calms are frequently interchanged with light variable winds, the Sea of Japan is not unfrequently smooth as a mirror, and navigation maintains its regular course. In India the monsoons of summer are the more violent, because at this season the differences of atmospheric pressure in consequence of the great heating of the land are most considerable. In the north-east monsoon district, however, weaker air-currents correspond to the slight differences of barometric conditions by sea and land. The number of calms is, nevertheless, in the whole island girdle of the north-east monsoon district considerably smaller than on the continent. On such quieter days, moreover, on the coasts of Japan the land and sea winds carry on their daily varying play, while the stronger and more extended movements of the air usually do not allow these interesting but more limited phenomena to be developed. A companion piece to them is formed by the hill and valley, or night and day winds, which are produced by analogous causes. In neo-volcanic mountains the valley winds, which through the day move towards the summit, blow with especial force, and in this way carry many seeds up the mountains; indeed, they are in Japan the chief medium by which vegetation has been carried to extinct

volcanoes, as I shall show more particularly in another part of this work.

When we speak of winds in connection with Eastern Asia, we must mention also those mighty whirlwinds, the Taifúns,¹ which, nearly related to the hurricanes of the West Indies and the cyclones of the Indian Ocean, are a terror to navigators and, next to inundations, are the most dreaded land-plagues of Japan. The taifúns have in common with other whirlwinds the turning round upon a centre, which itself continually moves more or less rapidly forward and describes a parabolic curve, the axis or path of the storm from south-east through south and west towards north-west to north-east, but often also only from west to east. The storm-wind at the same time blows around the storm-axis more or less in a circle from south to east, north, etc., and that with a rapidity and barometric pressure which have their minimum in the axis (here the speed is therefore always zero and the pressure sinks sometimes to 720-710 mm.) and increases with the distance from it. The taifúns also, like other whirlwinds, do not blow steadily, but intermittently in violent squalls, which are always accompanied by heavy rainfalls. The latter is so much the rule that in Japan in August or September, if a continuous abundant rainfall sets in and no taifún has preceded it, one is always pretty confidently expected, as one or two of these storms are known by experience to occur every autumn. It is likewise known that a long continuing heat about this time is not unfrequently terminated by the setting in of such a whirlwind. July, August and September are the months in which these winds usually occur; less frequently they occur as early as June, or are delayed until October.

According to a compilation in H. Mohn's "Grundzüge der Meteorologie," 46 taifúns were observed in the Chinese Sea from 1780-1845. It may be assumed, however, that the number of these winds in the times specified was in reality considerably larger, as it is only of late that the blowing of them has been rightly understood and observations of them have been more carefully recorded in log-books. A collection of all the whirlwinds noticed in Japanese waters since the Perry Expedition would be of great interest, but has not yet been attempted. The following view of the occurrence of cyclones in the Indian Ocean, and of the taifúns in the Chinese Sea is all that we can offer with regard to the statistics of these striking storms.

¹ The word Taifún has frequently been derived from the Chinese *tai*, great, and *fu* or *fung*, wind. Others have even connected it with the Arabic word *tuffán*, although its Greek origin, after the way in which *e.g.* Strabo uses *τὸ φῶρον-εἶδος*, is hardly doubtful.

| | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total. |
|-----------------------|------|------|------|-------|-----|------|------|------|-------|------|------|------|--------|
| Chinese Sea 1780-1845 | — | — | — | — | — | 2 | 5 | 5 | 18 | 10 | 6 | — | 46 |
| Gulf of Bengal | 2 | — | 2 | 9 | 21 | 10 | 3 | 4 | 6 | 31 | 18 | 29 | 135 |
| South Indian Ocean | | | | | | | | | | | | | |
| 1809-1848 | 9 | 13 | 10 | 8 | 4 | — | — | — | 1 | 1 | 4 | 3 | 53 |
| Island of Mauritius | | | | | | | | | | | | | |
| 1820-1844 | 9 | 15 | 15 | 8 | — | — | — | — | — | — | — | 6 | 53 |

We gather from this the important fact that these whirlwinds follow the apparent movements of the sun between the tropics from south to north and conversely, and in each district occur most frequently, not when the sun has reached its highest point, but two or three months later, when the water of the sea has its highest temperature and the stratum of air resting upon it is especially loaded with vapour. In the coldest months of the year whirlwinds occur almost as seldom in the Indian Ocean as in the eastern monsoon district.

The relative frequency of taifúns increases, generally speaking, from 38° lat., the northern limit of their occurrence, towards the south, appears also to be greater on the east side of the island than in the west, and is doubtless connected with the Kuro-shiwo, which in part at least they follow. The deflecting influence of the Kuro-shiwo and of the Tsushima current upon many taifúns was also seen in those of September, 1878, which E. Knipping has made the subject of an elaborate and interesting investigation in the 18th Heft of the "Mittheilungen der deutschen Gesellschaft." Moreover, the Inland Sea appears to be, if not an outlet, yet a specially convenient course for the further progress of the whirlwinds arising more to the south.

Of the last ten years the autumn of 1874 was especially marked by destructive taifúns. Table IX. gives the meteorological observations which were instituted at Nagasaki during the progress of such a taifún. It commenced in the night of the 20th-21st of August, and made great havoc in the whole of Hizen. The barometer had fallen in the course of the day from 759.0 mm. in the morning until 6 o'clock in the evening about 15.5 mm.; in the next 6 $\frac{3}{4}$ hours it sank as low as 719.8 mm., or in the course of 18 hours about 39.2 mm., 1.45 inch, and rose again in the next 9 hours almost to its normal height. It is further noteworthy that the temperature at the outbreak of this taifún was high and rose somewhat higher, that violent rains preceded it, accompanied its progress and followed it for three days more. The fall during its duration amounted to 57.9 mm., and on the three following days, indeed, the enormous quantity of 351.8 mm., or altogether 409.7 mm., or more than 15 inches. For six days after the storm the sky was covered with clouds, and rain showers from the south-west frequently occurred.

The havoc inflicted by this storm on the houses of the town, especially too in De-shima, among the ships in the harbour, as well as upon the fields was great, and even in the following year the traces could still be observed in many places. Unfortunately it was not possible to determine the entire area over which this storm raged; of the further information which could be obtained concerning it, the most important points may be here given.

The steamer *Costa Rica*, while the taifún was raging in north-west Kiushiu, was only 150 knots away on its course from Shanghai to Nagasaki, without perceiving the slightest indications of it. In Yokohama, at the time and on the following day, prevailed a moderate south wind, the sky was slightly overclouded, the barometer stood at 756.2 mm., and had fallen but slightly during two days, and the thermometer indicated 28°C.

The state of things was different in the Inland Sea of Japan and its neighbourhood. Between Hiroshima in Aki and Onomichi in Bingo, about midway from Shimonoseki to Hiogo and in lat. 33° 20' N., and long. 133° E. from Greenw. the storm set in on the 21st of August, at 6.15 a.m., from the north, then veered round by east to south and south-west, reached its fiercest at 10.30 a.m., and dropped towards 2 o'clock p.m., when the wind blew with decreasing force from the west. A continuous rain had already begun towards noon on the previous day during a calm and then increased in violence with the storm.

In Hiogo the barometer began to fall on the 21st August at 1.30 a.m., at which time a gentle breeze from the north-east was blowing. At day-break the wind blew violently from the south. It increased in force and developed into a taifún, which reached its height between 11 and 12 o'clock, then rapidly waned and was followed by a moderate west wind. The lowest point observed in the barometer was 751 mm. From all this it results that Hiogo was far removed from the path of the storm and was comparatively but feebly affected by the hurricane.

In Yokohama, on the 13th of September of the same year, a taifún was felt, which attained its strongest development in Awa and Katsusa to the east of Yedo Bay. Its axis passed 25 knots to the east of Yokohama and described a peculiar course, which in addition to other accounts is demonstrated in the 6th Heft of the *Mittheilungen der deutschen Gesellschaft*, etc., in Yokohama, according to the observations of Capt. Freiherr von Reibnitz on board the *Arkona*. This storm began at Yokohama at 6 a.m., with the barometer at 756 mm., and a temperature of 21°C. with a north wind, and had reached its greatest strength at 3 p.m. with an atmospheric pressure of 728.5 mm. and a temperature of 24°C. The storm had meanwhile veered round through E. to S. and S.W., and blew finally from N.W. with decreasing force, and a temperature of 25.5°C., and the barometer at 749 m.m. In Tôkio at mid-day the barometer was at 727.5 mm. The rain had been falling in torrents

from early morning and in almost calm weather, then the storm had joined forces with it and made its revolution from north-east to north-west, but attained its greatest force at south-west. The quantity of rain which fell on this day reached 80 mm. It is further noteworthy that during the whole course of the two taifúns here mentioned no essential variation of temperature was observed, and especially no fall in the thermometer.

Since Reye in his excellent book, "Die Wirbelstürme, Tornados und Wettersäulen" has established more emphatically and conclusively than had been done before him, the caloric set free by the condensation of atmospheric vapour to be the motive force and primary cause of such whirlwinds, and has mathematically shown its sufficiency, most professed meteorologists are inclined to his views. Almost all the facts are in their favour and against those of Dove, according to which the upper or returning trade winds forcing their way into the lower are the cause of the phenomena. The taifúns moreover have nothing in common with the monsoon-changes, for the spring is free from them. If we consider that, like the cyclone, they occur only in the months in which the sea is most heated by long continued and powerful insolation, the air above it comparatively calm and loaded with vapour, we shall understand that any disturbance of these conditions, such as the irruption of a colder current of air, the formation of clouds and a movement in the air in a vertical direction, and soon also a horizontal inrushing of the heavier air from all sides must take place. The revolution then follows of itself as a result of the rotation of the earth and of other causes.

In harmony with this view is the observation of Prof. Ferrell in the American Coast Survey, that the slight barometrical depression which follows the condensation of atmospheric vapour into water, forms the beginning of a current of air towards a centre, which acquires its further strength and direction through the circular movement of the air and the rotation of the earth. This forms the beginning and the cause of whirlwinds.

Very noteworthy, too, in this view is an article by H. F. Blanford, the Government Meteorologist for India, in *Nature* (1878, pp. 328-9), in a letter on "The Genesis of Cyclones," from which we may take the following: "We find that the antecedent conditions of a cyclone are light, variable winds and calms, with a nearly uniform barometric pressure all round the coasts [of the Indian Ocean]; and only to the south, in the neighbourhood of the equator, is there any considerable movement of the air, viz. from the west. Under these circumstances, the pressure falls over some part of the bay [of Bengal], most frequently in the middle, and especially to the west of the Andamans. This region of falling pressure is characterized by torrential rains, with, at first, but little wind; but after a day or two (sometimes several days) of this weather, a cyclonic circulation is set up, with a marked indraught in the

neighbourhood of the cyclone cradle, and thus the storm is generated. . . .

It was first noticed by Mr. Eliot as a general fact, that, during the formation of a cyclone in the Bay of Bengal, little or no rain falls on the coasts."

The facts and observations which are here summed up with regard to the cyclones of the Indian Seas, apply also, as is easily perceived, to the taifúns. The common view with reference to the latter that they are always accompanied by thunderstorms, is erroneous. Electric phenomena in the atmosphere throughout the whole eastern monsoon district are not common, and are only occasionally observed in connection with whirlwinds.

C. THE MOISTURE OF THE AIR, OR HYDROMETEORS.

The formation of clouds, the quantity of moisture in the air and rainfall, which we shall consider under the above heading, are as meteorological elements of climates of very unequal value, although they stand in intimate connection with each other, and rainfalls, with which we are here chiefly concerned, are not conceivable without the two others. For the daily period of overclouding we have as yet no sufficient observations from any place in Japan, the yearly period has been intimated in speaking of the monsoons, and it was pointed out that in the north-east monsoon district the colder season of the year has generally the brightest sky; yet the yearly amplitude of overclouding in the Japanese islands is much less than on the continent, or in other words, the difference of the greater overclouding during the summer as compared with the winter is not nearly so striking as, *e.g.* in China and Siberia, and therefore, too, the contrast of the bright sky in winter and the overclouded sky in summer to the Mediterranean district, where the converse is the case, is not so striking.

The relative moisture is most considerable in summer, and somewhat greater in the south of Japan than in the north. On the average it amounts to 82% for the warm season, 71% for the cold season, and 76% for the year. From the rule that it increases towards the south, Hakodate appears to be so far an exception that the figures assigned are in summer 85·6%, in winter 81%, but in the year 82%. Assuming the observations taken there to be trustworthy, this striking variation must be referred to the current setting through the Tsugaru Straits as well as from the north-east; for by the meeting of the two and the mingling of cold and warm atmospheric strata, the higher amount of moisture in the air may be explained just as easily as the frequent formation of fogs.

As regards the quantity and distribution of the yearly rainfall, most of the observations hitherto made are very fragmentary, and are unsatisfactory enough on the ground that they extend over too

brief a period. Yet we ascertain from them the important fact that the rainfalls are very considerable and much more heavy than on the neighbouring continent, that they are distributed over the whole year, but are generally found in much larger quantity in the warmer season of the year.

The following table confirms what we have here said. Nearly everywhere the five months from November to March are relatively dry; only in Yezo there appears to be a more equable distribution of the rainfall over the whole year. The yearly amount is strikingly great in Tôkio and Yokohama, as compared with other places. So long, however, as we have not more observations extending over longer periods, it appears a very fruitless effort to attempt to indicate the differences resulting from a comparison of the yearly quantities and their distribution; for in no meteorological element are these differences in different years so great and important as in this. Thus for example San Francisco had in 1865 only 11·73 inches of rain, a year later, however, 34·04 inches, or nearly three times as much, and in Yokohama the quantity here indicated of 1,794 mm., as the mean of the seven years' observations of Dr. Hepburn contrasts with the one year's observation of Dr. Mourier of only 1058·4 mm. The late summer and autumn of 1878 were marked by particularly abundant rainfalls, and the country in consequence of them suffered frequently by inundations. In Tôkio, according to Knipping, the quantity of rain during September reached 482 mm., and according to another authority there fell towards the middle of the month in Yokohama 176 mm. (6·9" Engl.) during 30 hours, a circumstance without a parallel in the memory of the inhabitants. The water of the rivers rose 3–5 metres, overflowed their banks, and turned the rice fields into lakes.

These examples may be sufficient to confirm what has been said above, and to exhibit the unequal value of the following data:—

COMPARATIVE TABLE OF THE YEARLY RAINFALL.

| | Number of Years of Observation. | Rainy Days. | Days with Clear Sky. | Yearly Quan- tity. | Rainfalls in mm. | | | | | |
|-------------|---------------------------------------|----------------|-------------------------------|--------------------------|------------------|------------------|-------|-------|-------|------|
| | | | | | Oct.— March. | April.— Sept. | Mnth. | Max. | Mnth. | Min. |
| Tôkio . . | 5 (Kpg.) | 133 | 4 | 1661 | 606·7 | 1054·3 | Sept. | 337·1 | Jan. | 58·1 |
| Yokohama | 7 | 97 | 3 | 1794 | 633·0 | 1161·0 | " | 259·0 | " | 60·0 |
| Ôsaka . . | 1 | — | — | 1054 | 389·0 | 665·0 | Oct. | 172·5 | " | 36·0 |
| Nagasaki . | 1 | 122 | — | 1212 | 307·0 | 905·0 | April | 280·0 | " | 27·0 |
| Niigata . . | 2 | 67 | 32 | | | | | | | |
| Hakodate. | 9 | 98 | 49 | 1318 | 585·7 | 732·0 | Aug. | 211·6 | Mar. | 56·9 |
| Sapporo . | 1 | 119 | 82 | 1053 | 687·0 | 466·0 | Nov. | 182·0 | April | 39·0 |

If the differences of temperature during the winter between the Mediterranean district and Japan speak in favour of the former, yet this advantage is in summer, so far as vegetation is concerned, more than compensated by the abundant rainfall in Nippon; for its amount is reached nowhere in the Mediterranean countries. In Middle Japan the warm monsoon brings two principal rainy periods in September and June, to which parts of the adjoining months are added, so that each embraces about six weeks. The rainy period of early summer is called Niu-bai, *i.e.* literally plum-ripeness. It is the most important period in the cultivation of rice, during which the rain often falls down in torrents. Many a time it continues for several days without interruption, indeed in 1875 it rained in Iwade-ken (Nambu) in the 40th parallel without ceasing from the 2nd to the 10th of July. All the rivers left their banks, broke down the dams, destroyed roads and bridges, carried away trees and banks, and transformed smiling fields into monotonous masses of mud.

Niu-bai is followed by Doyo, the time of dog days, from the middle of July to the middle or end of August, when the quantity of the rainfall is considerably less, the heat greatest. A second, and that the most important rainy season, embraces September and a portion of October. The warm sea breezes laden with moisture then produce, in consequence of the shorter days and greater cooling of the soil, a very considerable quantity of water; but even the monsoon changes in itself results at this season in considerable rainfall. The rainy season of early summer begins later and later as we go northward, and finally in Yezo coalesces with the autumn rains.

In Yokohama and Tôkio the rainiest month September contrasts with January as the driest. In the four winter months, November to February, falls only 18% of the entire rainfall, 82% of it to the eight remaining months, so that the relative quantities for equal periods are as 9 to 20.

There are but few districts in the world which compare with Japan as regards the quantity and distribution of the yearly rain-falls. This would chiefly be the case with the Gulf States of North America, where likewise the summer is the rainiest season of the year, and the quantity of rain equals that in Japan. Thus Mobile has a fall of 1,626 mm., Baton Rouge of 1,528 mm., New Orleans of 1,295 mm., St. Augustin of 1,092 mm.

In the plains on the side of the Pacific the snowfall is unimportant. In Tôkio it usually snows 4-5 times in January and February, and sometimes in March. The snowfall seldom lies more than 10 cm. deep, and only exceptionally lies on the ground longer than 2-3 days.

It is quite different in the north, and especially along the Sea of Japan and in the mountains. In particular the provinces of Hokuroku-dô between 35° and 39° N. present remarkable pecu-

liarities of climate. In the valleys of this part of the country deep snow covers the ground throughout the winter, and the sky is wrapped in a dark veil of clouds, so that bright days are a rare phenomenon. "It looks as though it were always going to rain," a native of this district expressed himself to the writer with regard to this appearance. This description applies especially to the provinces of Kaga, Noto and Echū, but Echigo, Shōnai, and Akita also essentially partake of the character of this winter.

Very surprising is the different aspect of the sky along the Sea of Japan as compared with the Pacific region during this season. If, for example, at the beginning of December we have on the way from Niigata to Tôkiô, after a long march through deep snow in the mountains, finally reached the elevation of the Mikuni-tôge, we observe to the eastward a bright sky, which delights the eye, while a deep veil of clouds hides the landscape as we look towards the Sea of Japan. There the summer seems to be still lingering, here the long winter has already set in.

In the upper valley of the Tetori-gawa, in the province of Kaga, 700-800 metres above the sea, 6 metres of snow are the rule, and 2 metres a rare exception. There in winter the people inhabit the upper rooms of the houses in order to enjoy daylight, and to pass from place to place, even with difficulty, they buckle on heavy snowshoes. Similar conditions are found in many other mountain valleys on this side of the country, while to the east of the mountain crest much more considerable elevations have scarcely 25-36 centimetres of snow.

In Echigo the winter is ushered in in November by thunderstorms and hailstorms, though the mountains have previously assumed their winter's garb. Then in December N. and N.W. winds bring an abundant snowfall to the plain also. In Niigata there are in the winter 32 days of snowfall. The snow covers the ground in the open country to the depth of 1-2½ metres, and is undoubtedly for many plants, such as the camellia and the tea-shrub, an effective protection against the winter's cold. This reaches its maximum of about -9° C. at the end of January or early in February. That the winter in this district is not more severe, we may attribute likewise in great part to the abundant snowfall, clouded sky, and the caloric thus set free, but partly also to the diminished radiating capacity of the earth in consequence.

The winter assumes an entirely different form on the west side of the Sea of Japan, *e.g.* at Wladiwostok. Here it has only 15-20 days of snow, but is otherwise characterized by an almost continually bright sky free from clouds.

The explanation of these peculiarities of the winter in the regions of Japan along the Sea of Japan is easy. When the cold dry north-west wind of the continent blows over the sea of Japan, it becomes mingled with the moister and warmer atmospheric strata there, and finally with a higher temperature, and more

moisture reaches Japan, whose temperature about this time is considerably lower than that of the sea. In proportion to the amount of moisture in the air, and the degree of the resulting process of cooling, there follows a precipitation of snow either in the plain or when the wind reaches the mountains bounding it on the east, and when as it ascends them its temperature is considerably lessened. When it has finally reached the crest of the mountains, and is descending again on the other side, its temperature increases together with its density ; it becomes less and less saturated, and the formation of clouds of course entirely ceases. Accordingly in the plain of Kuwantô, too, it seldom snows before the new year ; and only when the land here as well as the neighbouring sea has considerably cooled is it possible for the water-vapour to be condensed into snow.

Thunderstorms are neither frequent nor violent in Japan. In Yokohama there are reckoned from four to ten in the year, almost all of which occur in summer. In Niigata the number is somewhat larger and they fall principally in late summer and autumn. This is also the case in the island of Yezo. That here where the cold Arctic currents of the sea encounter the Kuro-shiwo and the Tsushima current, the appearance of fogs on the coast must be very frequent, we may infer with certainty, although we have as yet but few observations as to the time of their occurrence and their distribution.

I. CLIMATE OF TÔKIO, 35° 40' N. LAT. 139° 45' 10"

A. ACCORDING TO THREE YEARS' OBSERVATIONS AT THE IMPERIAL ME-

| | Air pressure in mm. | | | Temperature | | |
|---------------------|---------------------|-----------|----------|-------------|-----------|-----------|
| | Mean. | Maximum. | Minimum. | 9.30 a.m. | 3.30 p.m. | 9.30 p.m. |
| January | 764.4 | 776.3 | 745.6 | 2.6 | 5.9 | 1.2 |
| February | 763.4 | 773.9 | 745.3 | 3.5 | 6.7 | 2.2 |
| March | 761.6 | 774.0 | 744.5 | 7.8 | 14.5 | 6.1 |
| April | 762.8 | 778.0 | 747.3 | 13.6 | 15.9 | 11.4 |
| May | 760.0 | 772.6 | 743.1 | 18.7 | 20.6 | 16.4 |
| June | 758.3 | 767.0 | 745.5 | 21.4 | 23.0 | 18.7 |
| July | 759.2 | 764.2 | 746.9 | 27.2 | 28.6 | 24.2 |
| August | 759.3 | 765.7 | 750.2 | 26.6 | 28.8 | 24.2 |
| September | 760.2 | 768.0 | 738.0 | 23.1 | 25.0 | 21.0 |
| October | 764.2 | 772.7 | 743.6 | 15.9 | 18.0 | 13.7 |
| November | 763.5 | 787.2 (?) | 747.2 | 9.9 | 12.8 | 7.9 |
| December | 763.1 | 774.7 | 748.0 | 5.2 | 8.7 | 4.7 |
| Year | 761.6 | 787.2 (?) | 738.0 | 14.6 | 17.3 | 12.5 |
| Winter | 763.6 | 776.3 | 745.3 | 3.8 | 7.1 | 2.7 |
| Spring | 761.4 | 778.0 | 743.1 | 13.4 | 17.0 | 11.3 |
| Summer | 758.9 | 767.0 | 745.5 | 25.1 | 26.8 | 22.4 |
| Autumn | 762.6 | 787.2 | 738.0 | 16.3 | 18.6 | 14.2 |

| | Frosty Nights. | Rainy days. | | Snowy Days. | Number of Thunderstorms. | Number of Earthquakes. |
|---------------------|----------------|--------------|-------|-------------|--------------------------|------------------------|
| | | Quantity mm. | Days. | | | |
| January | 26 | 85 | 5 | 7 | — | 2 |
| February | 16 | 89 | 7 | 3 | — | 6 |
| March | 3 | 108 | 12 | 1 | — | 5 |
| April | — | 78 | 12 | — | — | 5 |
| May | — | 153 | 12 | — | 1 | 4 |
| June | — | 198 | 12 | — | — | 3 |
| July | — | 106 | 13 | — | 1 | 3 |
| August | — | 90 | 13 | — | 1 | 2 |
| September | — | 342 | 16 | — | 1 | 2 |
| October | 2 | 124 | 11 | — | — | 4 |
| November | 6 | 117 | 11 | 1 | 1 | 4 |
| December | 14 | 57 | 9 | 1 | — | 4 |
| Year | 67 | 1547 | 133 | 13 | 5 | 44 |
| Winter | 56 | 231 | 21 | 11 | — | 12 |
| Spring | 3 | 339 | 36 | 1 | 1 | 14 |
| Summer | — | 394 | 38 | — | 2 | 8 |
| Autumn | 8 | 583 | 26 | 1 | 2 | 10 |

E. LONG. HEIGHT ABOVE THE SEA, 19'2 METRES.

TEOROLOGICAL OBSERVATORY. ARRANGED BY O. DERSCH, STUD. GEOGR.

| according to Celsius. | | | | | Relative Moisture in % | | | Clouding. |
|-----------------------|-----------|-------------|-------------|------------|---------------------------|-----------|-----------|-----------|
| Mean. | Mean Min. | Absol. Max. | Absol. Min. | Variation. | 9.30 a.m. | 3.30 p.m. | 9.30 p.m. | 0-10. |
| 1'9 | — 2'2 | 13'6 | — 9'1 | 22'7 | 68 | 67 | 79 | 5'0 |
| 2'6 | — 1'6 | 15'2 | — 5'2 | 20'4 | 66 | 65 | 76 | 5'3 |
| 6'5 | 1'3 | 19'5 | — 3'6 | 23'1 | 62 | 59 | 73 | 4'9 |
| 11'9 | 6'9 | 23'8 | — 1'6 | 25'4 | 70 | 64 | 83 | 5'8 |
| 16'9 | 12'0 | 27'8 | 6'1 | 21'7 | 73 | 67 | 86 | 6'5 |
| 19'7 | 15'6 | 31'3 | 8'6 | 22'7 | 76 | 71 | 88 | 7'0 |
| 24'1 | 21'0 | 35'0 | 14'0 | 21'0 | 72 | 71 | 88 | 5'5 |
| 25'1 | 20'7 | 35'6 | 15'8 | 19'8 | 75 | 67 | 88 | 6'2 |
| 21'7 | 18'0 | 32'8 | 11'3 | 21'5 | 84 | 73 | 90 | 7'5 |
| 14'2 | 9'2 | 26'7 | — 0'6 | 27'3 | 74 | 66 | 89 | 5'5 |
| 8'6 | 4'1 | 23'0 | — 2'7 | 25'7 | 71 | 66 | 81 | 5'2 |
| 4'7 | 0'4 | 20'8 | — 5'9 | 26'7 | 70 | 66 | 83 | 5'1 |
| 13'2 | 8'8 | 35'6 | — 9'1 | 44'7 | 72 | 67 | 83 | 5'8 |
| 3'1 | — 1'1 | 20'8 | — 9'1 | 29'9 | 68 | 66 | 79 | 5'1 |
| 11'8 | 6'7 | 27'8 | — 3'6 | 31'4 | 68 | 63 | 81 | 5'7 |
| 23'0 | 19'1 | 35'6 | 8'6 | 27'0 | 74 | 70 | 88 | 6'2 |
| 14'8 | 10'4 | 32'8 | — 2'7 | 35'5 | 76 | 68 | 87 | 6'1 |
| N. | N.E. | E. | S.E. | S. | S.W. | W. | N.W. | |
| 37 | 9 | 4 | 6 | 4 | 2 | 3 | 27 | |
| 30 | 7 | 4 | 6 | 4 | 3 | 6 | 29 | |
| 35 | 10 | 7 | 11 | 9 | 3 | 2 | 25 | |
| 18 | 19 | 8 | 12 | 23 | 5 | 2 | 9 | |
| 16 | 18 | 14 | 13 | 25 | 8 | 1 | 7 | |
| 13 | 15 | 14 | 17 | 24 | 8 | 2 | 3 | |
| 5 | 6 | 6 | 11 | 35 | 20 | 2 | 3 | |
| 5 | 13 | 15 | 19 | 26 | 11 | 2 | 4 | |
| 23 | 18 | 12 | 10 | 16 | 8 | 3 | 4 | |
| 30 | 17 | 8 | 10 | 10 | 3 | 3 | 14 | |
| 37 | 11 | 8 | 5 | 4 | 5 | 4 | 22 | |
| 45 | 11 | 5 | 4 | 2 | 2 | 4 | 23 | |
| 274 | 154 | 105 | 124 | 182 | 78 | 34 | 170 | |
| 37 | 9 | 4 | 5 | 3 | 2 | 4 | 26 | |
| 23 | 16 | 10 | 12 | 19 | 5 | 2 | 14 | |
| 8 | 11 | 12 | 16 | 28 | 13 | 2 | 3 | |
| 30 | 15 | 9 | 8 | 10 | 5 | 3 | 13 | |

CLIMATE OF TÔKIO, 35° 40' N. LAT.,

B. ACCORDING TO FIVE YEARS' OBSER-

| | Air Pressure in mm. | | | | | | Temperature |
|---------------------|---------------------|------------------|------------------|--------|--------|--------|------------------|
| | Mean. | Mean Maximum. | Mean Minimum. | 7 a.m. | 2 p.m. | 9 p.m. | Mean Minimum. |
| December 1872 | 764.0 | 773.2 | 748.8 | 2.92 | 8.85 | 5.07 | 1.81 |
| 1873—1877 incl. | | | | | | | |
| January | 763.2 | 773.7 | 749.9 | — 0.94 | 6.01 | 1.79 | — 1.9 |
| February | 762.2 | 772.1 | 750.8 | — 0.25 | 6.75 | 2.55 | — 1.31 |
| March | 762.2 | 773.0 | 749.9 | 3.13 | 8.41 | 5.62 | 2.07 |
| April | 761.7 | 771.0 | 750.0 | 7.67 | 13.13 | 9.92 | 6.13 |
| May | 760.3 | 770.1 | 752.5 | 11.70 | 16.11 | 13.16 | 10.08 |
| June | 758.6 | 765.9 | 747.9 | 18.85 | 23.14 | 20.80 | 13.72 |
| July | 758.5 | 763.7 | 749.4 | 23.34 | 28.10 | 24.60 | 17.54 |
| August | 758.8 | 764.9 | 750.3 | 23.96 | 29.04 | 25.39 | 18.32 |
| September | 759.9 | 769.0 | 739.0 | 15.66 | 19.27 | 16.78 | 14.94 |
| October | 762.2 | 771.0 | 747.8 | 9.7 | 14.60 | 11.50 | 8.98 |
| November | 762.5 | 773.2 | 750.9 | 4.01 | 10.50 | 6.58 | 3.38 |
| December | 762.8 | 773.7 | 748.8 | 1.74 | 9.04 | 4.40 | 0.81 |
| Year | 761.1 | 770.1 | 748.9 | 9.88 | 15.34 | 11.92 | 7.06 |
| Winter | 762.7 | 773.2 | 749.8 | 0.58 | 7.20 | 3.14 | — 0.47 |
| Spring | 761.4 | 771.4 | 750.8 | 7.50 | 12.55 | 9.57 | 6.09 |
| Summer | 758.6 | 766.6 | 749.2 | 22.05 | 26.76 | 23.60 | 16.53 |
| Autumn | 762.5 | 771.3 | 745.9 | 9.79 | 14.79 | 11.62 | 9.10 |

II. CLIMATE OF YOKOHAMA 35° 26' N. LAT.,

ACCORDING TO SEVEN YEARS' OBSERVATIONS BY DR. HEPBURN

| | Air Pressure in mm. | | | Mean. |
|---------------------|---------------------|----------|----------|-------|
| | Mean. | Maximum. | Minimum. | |
| January | 761.3 | 770.5 | 746.0 | 4.1 |
| February | 762.3 | 771.6 | 744.2 | 4.9 |
| March | 762.8 | 773.0 | 750.8 | 8.0 |
| April | 761.3 | 769.6 | 744.5 | 13.2 |
| May | 760.3 | 770.4 | 746.0 | 17.4 |
| June | 757.6 | 766.8 | 749.8 | 20.6 |
| July | 755.8 | 762.3 | 744.2 | 23.3 |
| August | 757.1 | 765.3 | 744.2 | 25.6 |
| September | 760.3 | 769.0 | 751.1 | 21.6 |
| October | 761.5 | 771.6 | 745.2 | 16.2 |
| November | 764.8 | 773.7 | 747.3 | 10.8 |
| December | 763.5 | 778.4 | 745.2 | 6.2 |
| Year | 760.7 | 778.4 | 744.2 | 14.3 |
| Winter | 762.4 | 778.4 | 744.2 | 5.1 |
| Spring | 761.4 | 773.0 | 744.5 | 12.9 |
| Summer | 757.0 | 770.4 | 744.5 | 23.2 |
| Autumn | 762.2 | 773.7 | 745.2 | 16.2 |

139° 47' E. LONG. HEIGHT ABOVE THE SEA, 7 METRES.

VATIONS BY E. KNIPPING. (1873-1877.)

| according to Celsius. | | | | Relative Moisture % | Quantity in mm. | Rainfall. | | Frosty Nights. |
|-----------------------|------|--------|-------------|---------------------------|--------------------|-----------|----------------|-------------------|
| Mean. | Max. | Min. | Difference. | | | Days. | Snowy Days. | |
| 5'49 | 17'7 | — 3'2 | 20'9 | 73'0 | 93'6 | 9 | 0 | 13 |
| 2'15 | 11'5 | — 6'75 | 17'75 | 67'88 | 58'1 | 11 | 3 | 24 |
| 2'9 | 13'1 | — 5'2 | 19'5 | 63'13 | 63'1 | 9 | 2 | 19 |
| 5'7 | 15'5 | — 2'8 | 18'2 | 69'17 | 135'0 | 14 | 1 | 8 |
| 10'16 | 18'3 | 1'0 | 17'3 | 70'87 | 91'2 | 14 | — | — |
| 13'53 | 21'7 | 4'6 | 15'1 | 76'17 | 138'3 | 15 | — | — |
| 20'54 | 29'5 | 12'6 | 16'9 | 81'20 | 202'2 | 17 | — | — |
| 25'10 | 32'5 | 16'75 | 15'9 | 82'33 | 134'2 | 14 | — | — |
| 26'95 | 33'6 | 18'4 | 17'2 | 80'94 | 151'4 | 13 | — | — |
| 17'12 | 23'8 | 11'1 | 12'7 | 85'38 | 337'1 | 19 | — | — |
| 11'77 | 19'2 | 5'4 | 13'8 | 78'89 | 191'3 | 18 | — | — |
| 6'92 | 15'1 | 0'9 | 14'2 | 73'19 | 85'0 | 18 | — | 3 |
| 4'90 | 15'7 | — 3'9 | 19'6 | 69'74 | 74'2 | 15 | — | 14 |
| 12'34 | 33'6 | — 6'75 | 40'35 | 75'03 | 1661'1 | 177 (?) | 6 (?) | 68 |
| 3'48 | 17'7 | — 6'75 | 24'45 | 67'03 | 195'4 | 35 | 5 | 57 |
| 9'86 | 21'7 | — 2'8 | 24'5 | 72'10 | 364'5 | 43 | 1 | 8 |
| 24'20 | 33'6 | 12'6 | 21'0 | 81'72 | 467'8 | 44 | — | — |
| 11'94 | 23'8 | 0'9 | 22'9 | 79'35 | 613'4 | 55 | — | 3 |

139° 49' E. LONG. HEIGHT ABOVE THE SEA, 7 METRES.

(1863-1869), THE EXTREMES ACCORDING TO TWO YEAR'S OBSERVATIONS.

| Maximum. | Minimum. | Difference. | Moisture % | Rainfall. | |
|----------|----------|-------------|---------------|--------------------|-------|
| | | | | Quantity in mm. | Days. |
| 16'0 | — 6'6 | 22'6 | 61'0 | 60 | 4'4 |
| 21'5 | — 3'2 | 24'7 | 74'0 | 84 | 6'1 |
| 21'8 | — 1'7 | 23'5 | 68'0 | 128 | 8'4 |
| 27'7 | — 0'3 | 27'4 | 75'0 | 167 | 9'7 |
| 28'0 | 7'0 | 21'0 | 77'0 | 148 | 8'4 |
| 31'9 | 12'0 | 19'9 | 82'0 | 208 | 11'3 |
| 35'0 | 17'0 | 18'0 | 84'0 | 209 | 10'0 |
| 35'5 | 15'5 | 20'0 | 79'0 | 170 | 9'3 |
| 32'0 | 11'0 | 21'0 | 78'0 | 259 | 11'9 |
| 24'0 | — 0'6 | 25'6 | 75'0 | 176 | 7'0 |
| 21'0 | — 2'2 | 23'2 | 74'0 | 88 | 6'6 |
| 20'0 | — 4'4 | 24'4 | 71'0 | 97 | 4'3 |
| 35'5 | — 6'6 | 28'9 | 75'0 | 1794 | 97'4 |
| 21'5 | — 6'6 | 28'1 | 68'7 | 241 | 14'8 |
| 31'9 | — 1'7 | 33'6 | 73'3 | 443 | 26'5 |
| 35'5 | 12'0 | 23'5 | 81'7 | 587 | 30'6 |
| 32'0 | — 2'2 | 34'2 | 75'7 | 523 | 25'5 |

III. CLIMATE OF ŌSAKA, 34° 20'

ACCORDING TO THE OBSERVATIONS OF DR. GRATAMA,

| | Jan. | Feb | March. | April. | May. | June. | July. |
|--------------------------------|-------|-------|--------|--------|-------|-------|-------|
| Air Pressure in mm. | 763·7 | 764·4 | 762·3 | 761·3 | 759·5 | 756·4 | 756·1 |
| Temperature acc. Cels. | 4·1 | 6·5 | 9·6 | 13·9 | 17·5 | 22·7 | 26·0 |
| Vapour Pressure in mm. | 4·9 | 5·5 | 6·6 | 9·4 | 10·9 | 18·0 | 18·9 |
| Moisture in % | 70·0 | 68·0 | 68·0 | 76·0 | 73·0 | 90·0 | 77·0 |
| Clouding 0-10 | 4·9 | 6·4 | 5·8 | 6·7 | 6·3 | 7·8 | 6·8 |
| Rain in mm. | 36·0 | 37·7 | 38·8 | 93·9 | 12·92 | 72·5 | 126·7 |

IV. CLIMATE OF NAGASAKI, 32° 44'

ACCORDING TO TEN YEARS' OBSERVATIONS IN DE-SHIMA,

(The Hydrometeore refer

| | Air Pressure in mm. | | | Temperature | | |
|--------------------|---------------------|------------------|-----------------|-------------|------------------|-------|
| | Mean. | Means of Max. | Monthly Min. | Mean. | Means of Max. | Min. |
| January. | 766·4 | 773·1 | 755·6 | 5·6 | 16·1 | — 1·3 |
| February | 765·2 | 771·8 | 755·9 | 6·4 | 15·0 | — 1·9 |
| March | 764·5 | 771·8 | 755·9 | 9·5 | 17·6 | 0·8 |
| April. | 761·5 | 768·4 | 753·2 | 14·6 | 22·1 | 4·4 |
| May. | 759·1 | 764·7 | 751·8 | 18·6 | 25·5 | 11·4 |
| June. | 756·5 | 762·4 | 750·3 | 21·7 | 27·4 | 15·8 |
| July | 756·6 | 761·6 | 749·9 | 26·2 | 30·9 | 19·5 |
| August | 755·6 | 761·3 | 749·2 | 27·3 | 31·1 | 21·9 |
| September. | 753·7 | 763·6 | 752·0 | 24·2 | 30·3 | 17·6 |
| October | 762·8 | 770·6 | 757·9 | 18·1 | 26·3 | 9·4 |
| November. | 765·6 | 770·8 | 759·0 | 12·6 | 21·2 | 2·8 |
| December. | 766·3 | 771·3 | 759·5 | 7·0 | 16·2 | — 0·3 |
| Year. | 761·6 | 774·4 | 747·6 | 16·0 | 31·6 | 2·4 |
| Winter | 766·0 | 772·1 | 757·0 | 6·5 | 15·8 | — 1·2 |
| Spring | 761·7 | 768·3 | 753·6 | 14·7 | 21·7 | 5·5 |
| Summer | 756·2 | 761·8 | 749·8 | 25·1 | 29·8 | 19·1 |
| Autumn | 762·4 | 767·7 | 756·3 | 18·3 | 25·9 | 9·9 |

V. CLIMATE OF NAGA (RIUKIU ISLANDS),

ACCORDING TO THE OBSERVATIONS OF PATER FURET, DECEMBER

| | January. | February. | March. | April. | May. | June. | July. |
|-------------------------|----------|-----------|--------|--------|-------|-------|-------|
| Temperature (Cels.) . . | 16·1 | 15·7 | 17·9 | 20·4 | 24·1 | 26·3 | 28·6 |
| Air Pressure in mm. . . | 764·2 | 764·0 | 763·6 | 761·8 | 758·6 | 757·0 | 756·4 |

N. LAT., 135° 19' E. LONG.

DECEMBER, 1869, TO JANUARY, 1871.

| August. | Sept. | October. | Nov. | Dec. | Year. | Winter. | Spring. | Summer. | Autumn. |
|---------|-------|----------|-------|-------|--------|---------|---------|---------|---------|
| 758°0 | 759°5 | 762°0 | 765°8 | 763°7 | 761°1 | 763°9 | 761°0 | 756°8 | 762°4 |
| 27°2 | 24°4 | 19°1 | 13°6 | 7°9 | 16°0 | 6°2 | 13°7 | 25°3 | 19°0 |
| 20°9 | 17°8 | 13°3 | 9°6 | 6°1 | 11°8 | 5°5 | 9°0 | 19°3 | 13°6 |
| 80°0 | 81°0 | 87°0 | 79°0 | 70°0 | 76°2 | 69°0 | 72°0 | 82°0 | 82°0 |
| 5°8 | 7°3 | 5°3 | 6°7 | 4°7 | 6°3 | 5°3 | 6°3 | 6°8 | 6°5 |
| 86°9 | 144°8 | 172°5 | 67°0 | 36°5 | 1053°8 | 121°5 | 261°9 | 286°1 | 384°3 |

N. LAT., 129° 42' E. LONG.

TAKEN AT A HEIGHT OF 8 METRES ABOVE THE SEA, 1845-1855.

only to the Year 1872.)

| (Celsius) Monthly Amplitude. | Clouding. % | Vapour Pressure mm. | Relative Moisture % | Rainfall. | | Prevailing Wind. |
|------------------------------------|----------------|---------------------------|---------------------------|-----------|-------|------------------|
| | | | | Quantity. | Days. | |
| 17°4 | 5°7 | 5°9 | 77°0 | 26°9 | 11 | W. 88° N. |
| 16°9 | 5°5 | 6°1 | 75°0 | 59°0 | 9 | W. 81° N. |
| 16°8 | 5°2 | 7°5 | 75°0 | 89°4 | 9 | W. 78° N. |
| 17°7 | 5°3 | 10°2 | 76°0 | 280°3 | 15 | W. 35° N. |
| 14°1 | 4°8 | 12°2 | 75°0 | 124°0 | 8 | W. 57° N. |
| 11°6 | 5°7 | 15°6 | 81°0 | 143°8 | 13 | S. 53° W. |
| 11°4 | 5°0 | 20°2 | 82°0 | 66°1 | 11 | S. 17° W. |
| 9°2 | 4°3 | 21°0 | 80°0 | 145°6 | 12 | S. 31° W. |
| 12°7 | 4°3 | 18°0 | 80°0 | 140°4 | 11 | N. 23° E. |
| 16°9 | 4°8 | 12°4 | 76°0 | 29°9 | 11 | N. 9° E. |
| 18°4 | 4°9 | 8°8 | 77°0 | 44°4 | 9 | W. 86° N. |
| 16°5 | 5°8 | 6°9 | 78°0 | 67°8 | 10 | W. 86° N. |
| 34°0 | 4°9 | 12°1 | 77°5 | 1211°6 | 122 | — |
| 17°0 | 5°7 | 6°3 | 76°7 | 153°7 | 30 | W. 85° N. |
| 16°2 | 5°1 | 10°0 | 75°3 | 493°7 | 32 | W. 57° N. |
| 10°7 | 5°0 | 18°9 | 81°0 | 355°5 | 36 | S. 34° W. |
| 16°0 | 4°7 | 13°1 | 77°7 | 214°7 | 31 | N. 9° E. |

26° 13'3' N. LAT., 128° 43'6' E. LONG.

1856, TO SEPTEMBER, 1858. 10 METRES ABOVE THE SEA.

| August. | Sept. | Oct. | Nov. . | Dec. | Year. | Winter. | Spring. | Summer. | Autumn. |
|---------|-------|-------|--------|-------|-------|---------|---------|---------|---------|
| 27°7 | 27°0 | 25°5 | 21°0 | 18°3 | 22°4 | 16°7 | 20°8 | 27°5 | 24°5 |
| 753°8 | 756°5 | 759°9 | 763°6 | 764°9 | 760°4 | 764°3 | 761°3 | 755°7 | 760°0 |

VI. CLIMATE OF NIIGATA,

A. ACCORDING TO FIVE YEARS' OBSERVATIONS OF CONSUL

Temperature

| Year. | January. | February. | March. | April. | May. | June. | July. | August. |
|-------|----------|-----------|--------|--------|-------|-------|-------|---------|
| 1870 | 0'16 | 1'49 | 5'71 | 11'15 | 16'25 | 21'10 | 24'40 | 26'95 |
| 1871 | 0'19 | — 1'24 | 3'70 | 10'52 | 15'77 | 19'48 | 26'20 | 27'70 |
| 1872 | — 0'13 | — 0'14 | 4'28 | 11'79 | 16'13 | 20'27 | 25'92 | 25'78 |
| 1873 | 1'10 | 0'44 | 3'34 | 11'90 | 16'59 | 20'86 | 24'71 | 27'28 |
| 1874 | 2'80 | 3'81 | 6'60 | 12'60 | 15'64 | 21'32 | 23'79 | 26'14 |
| Mean | 0'88 | 0'89 | 4'49 | 11'59 | 16'80 | 20'59 | 25'60 | 26'39 |

B. ACCORDING TO THE OBSERVATIONS OF

| | Jan. | Feb. | March. | April. | May. | June. |
|---------------------------------|------|------|--------|--------|------|-------|
| Temperature { Mean | 0'2 | 0'4 | 4'4 | 10'9 | 16'0 | 20'2 |
| Mean Maximum | 9'0 | 7'0 | 21'0 | 21'0 | 28'0 | 31'0 |
| Mean Minimum | —9'0 | —7'0 | —4'0 | 2'0 | 9'0 | 11'0 |
| No. of Rainy days | 3 | 2 | 3'5 | 7 | 3'5 | 8 |
| No. of Snowy days | 12'5 | 3'5 | 5 | — | — | — |
| No. of Tempests | — | — | — | — | 1 | 0'5 |
| Force and direction of Wind . . | N. | N.E. | E. | SE. | S. | SW. |
| Winter | 9 | 9 | 1 | 3 | 19 | 18 |
| Spring | 7 | 12 | 5 | 7 | 15 | 22 |
| Summer | 12 | 15 | 5 | 7 | 10 | 21 |
| Autumn | 14 | 17 | 1 | 6 | 13 | 21 |
| Year | 42 | 53 | 12 | 23 | 57 | 82 |

VII. CLIMATE OF HAKODATE

ACCORDING TO NINE YEARS' OBSERVATIONS OF

| | Pressure of Air in mm. Mean. | Temperature according to Celsius. | | | | Relative Moisture % |
|----------------|------------------------------------|-----------------------------------|----------|----------|-------------|---------------------------|
| | | Mean. | Maximum. | Minimum. | Difference. | |
| January . . . | 758'9 | — 2'6 | 9'7 | —16'7 | 26'4 | 77'5 |
| February . . . | 758'9 | — 1'5 | 9'4 | —14'7 | 24'1 | 77'1 |
| March . . . | 759'9 | 1'7 | 15'6 | —10'6 | 26'2 | 80'2 |
| April . . . | 759'5 | 6'8 | 20'0 | — 4'8 | 24'8 | 77'2 |
| May . . . | 757'7 | 11'4 | 24'4 | — 0'56 | 25'0 | 86'7 |
| June . . . | 757'9 | 15'0 | 25'6 | 5'8 | 19'8 | 91'0 |
| July . . . | 757'4 | 19'3 | 30'3 | 9'2 | 21'1 | 78'0 |
| August . . . | 757'2 | 21'4 | 31'1 | 12'2 | 18'9 | 87'9 |
| September . . | 760'2 | 18'0 | 27'8 | 7'6 | 20'2 | 81'4 |
| October . . . | 761'2 | 11'7 | 25'6 | 0'0 | 25'6 | 83'6 |
| November . . | 761'7 | 5'5 | 16'1 | — 7'8 | 23'9 | 78'9 |
| December . . | 761'2 | 0'1 | 13'3 | —13'3 | 26'6 | 89'5 |
| Year . . . | 760'2 | 8'9 | 31'1 | —16'7 | 47'8 | 82'2 |
| Winter . . . | 759'7 | — 1'3 | 10'8 | —14'9 | 25'7 | 81'4 |
| Spring . . . | 759'0 | 6'6 | 20'0 | — 5'3 | 25'3 | 81'4 |
| Summer . . . | 757'5 | 18'5 | 29'0 | 9'1 | 19'9 | 85'6 |
| Autumn . . . | 761'0 | 11'7 | 23'2 | — 0'1 | 23'3 | 81'3 |

37° 55' N. LAT., 139° 10' E. LONG.

LEYSNER, STATION AT A HEIGHT OF 6·5 METRES ABOVE THE SEA
according to Celsius.

| Sept. | October. | November. | December. | Year. | Winter. | Spring. | Summer. | Autumn. |
|-------|----------|-----------|-----------|-------|---------|---------|---------|---------|
| 23·90 | 16·49 | 10·86 | 2·35 | 13·36 | 1·33 | 11·4 | 24·0 | 17·80 |
| 21·98 | 18·77 | 10·45 | 3·30 | 12·95 | 0·75 | 9·79 | 24·19 | 17·70 |
| 21·86 | 16·24 | 9·60 | 4·65 | 13·10 | 1·46 | 10·73 | 23·99 | 15·90 |
| 21·49 | 14·21 | 7·78 | 5·37 | 12·91 | 2·30 | 10·61 | 24·28 | 14·49 |
| 20·36 | 14·53 | 8·42 | 4·67 | 13·32 | 3·76 | 11·77 | 23·82 | 14·44 |
| 21·91 | 16·30 | 9·43 | 4·08 | 13·11 | 1·95 | 10·78 | 24·50 | 15·79 |

CONSUL ENSLIE, 1870-1871.

| July. | August. | Sept. | Oct. | Nov. | Dec. | Year. | Winter. | Spring. | Summer. | Autumn. |
|-------|---------|-------|------|------|-------|-------|---------|---------|---------|---------|
| 25·0 | 27·0 | 22·9 | 17·6 | 10·7 | 2·8 | 13·2 | 1·1 | 10·4 | 24·1 | 17·1 |
| 35·0 | 35·0 | 32·0 | 25·0 | 19·0 | 12·0 | 36·0 | 9·3 | 23·3 | 33·7 | 75·3 |
| 18·0 | 20·0 | 14·0 | 7·0 | 4·0 | — 1·0 | — 9·0 | — 5·7 | 2·3 | 16·3 | 8·3 |
| 5 | 5·7 | 10 | 6 | 8·7 | 5 | 67 | 10 | 14 | 20·7 | 24·7 |
| — | — | — | — | 2 | 9 | 32 | 25 | 5 | — | 2 |
| 3 | 3 | 3 | 0·5 | 0·5 | 0·5 | 12 | 0·5 | 1 | 7·5 | 4 |
| W. | NW. | | | | | | | | | |
| 13 | 17 | | | | | | | | | |
| 10 | 8 | | | | | | | | | |
| 14 | 7 | | | | | | | | | |
| 7 | 11 | | | | | | | | | |
| 50 | 43 | | | | | | | | | |

41° 46' N. LAT., 140° 45' E. LONG.

ALBRECHT, KOSTEROFF AND BLAKISTON.

| Quantity in mm. | Fall. | Snowy Days. | General Direction of Wind. | | | | |
|--------------------|-------------|----------------|----------------------------|------|------|-------|--------|
| | Rainy Da s. | | N. | E. | S. | W. | Gales. |
| 151·4 | 2·4 | 14·8 | 5·0 | 5·9 | 1·9 | 17·1 | 1·4 |
| 57·4 | 1·5 | 9·7 | 6·6 | 2·6 | 1·9 | 12·8 | 1·1 |
| 56·9 | 4·9 | 7·9 | 4·6 | 3·2 | 4·8 | 13·8 | 1·2 |
| 63·6 | 9·0 | 1·8 | 3·1 | 6·8 | 7·3 | 9·6 | 1·5 |
| 62·7 | 9·9 | 0·1 | 1·7 | 8·8 | 8·8 | 7·5 | 0·8 |
| 175·8 | 9·1 | — | 1·2 | 11·5 | 7·0 | 5·0 | 1·0 |
| 76·5 | 10·4 | — | 7·4 | 14·9 | 6·2 | 4·9 | 0·8 |
| 211·6 | 12·9 | — | 1·9 | 13·7 | 7·4 | 5·8 | 1·6 |
| 141·2 | 12·3 | — | 2·8 | 8·6 | 4·4 | 8·9 | 1·7 |
| 120·4 | 10·5 | 0·1 | 3·3 | 5·6 | 4·4 | 13·5 | 1·2 |
| 109·9 | 9·1 | 4·3 | 0·6 | 3·0 | 4·1 | 13·7 | 1·7 |
| 89·7 | 6·2 | 10·2 | 6·9 | 1·9 | 2·6 | 16·6 | 1·1 |
| 1317·1 | 98·2 | 48·9 | 45·1 | 86·5 | 60·8 | 128·4 | 15·1 |
| 293·5 | 10·1 | 34·7 | 18·5 | 10·4 | 6·4 | 46·5 | 3·6 |
| 183·2 | 23·8 | 9·8 | 9·4 | 18·8 | 20·9 | 29·9 | 3·5 |
| 463·9 | 32·4 | — | 10·5 | 40·1 | 20·6 | 15·8 | 3·4 |
| 371·5 | 31·9 | 4·4 | 6·7 | 17·2 | 12·9 | 36·2 | 4·6 |

VIII. CLIMATE OF SAPPORO, 43° 3' 56" N. LAT.,
ACCORDING TO 16 MONTHS' OBSERVATIONS (SEPTEMBER, 1876, TO JANUARY, 1878)

| | Air-pressure in mm. | | | Temperature | | |
|---------------|---------------------|-----------------|----------|-------------|------------------|----------------------|
| | Mean. | Maximum. | Minimum. | 7 a.m. | 2 p.m. | 9 p.m. |
| 1876 | | | | | | |
| September . | 758.1 | 767.8 | 743.4 | 14.4 | 19.2 | 15.5 |
| October . . | 769.7 | 770.2 | 746.4 | 6.7 | 13.8 | 8.8 |
| November . | 753.5 | 764.0 | 737.6 | 0.06 | 4.5 | 2.0 |
| December . | 757.4 | 769.8 | 741.6 | — 4.6 | — 0.2 | — 2.9 |
| 1877 | | | | | | |
| January . . | 759.2 | 777.0 | 749.8 | — 3.0 | 0.1 | — 1.6 |
| February . | 756.3 | 766.4 | 742.6 | — 4.8 | 0.3 | — 2.2 |
| March . . . | 755.9 | 766.1 | 738.1 | — 0.6 | 3.8 | 0.9 |
| April . . . | 758.4 | 770.8 | 746.5 | 3.8 | 10.2 | 5.7 |
| May | 758.2 | 767.7 | 738.9 | 7.9 | 12.7 | 8.5 |
| June | 753.5 | 762.6 | 734.9 | 14.9 | 20.0 | 15.0 |
| July | 755.0 | 760.7 | 748.4 | 19.5 | 24.0 | 19.7 |
| August . . . | 754.8 | 763.2 | 743.4 | 20.4 | 25.6 | 21.5 |
| September . | 758.6 | 765.6 | 747.1 | 14.0 | 21.0 | 15.7 |
| October . . . | 757.4 | 766.0 | 743.7 | 8.4 | 15.1 | 10.2 |
| November . | 759.6 | 773.5 | 745.4 | 0.7 | 4.7 | 1.9 |
| December . | 760.5 | 769.9 | 750.1 | — 4.0 | 0.6 | — 1.8 |
| Year | 757.3 | 773.5 | 734.9 | 6.4 | 11.5 | 7.8 |
| Winter . . . | 757.6 | 777.0 | 741.6 | — 4.1 | 0.1 | — 2.3 |
| Spring . . . | 757.5 | 770.8 | 738.1 | 3.7 | 8.9 | 5.0 |
| Summer . . . | 754.4 | 765.6 | 734.9 | 18.3 | 23.2 | 18.7 |
| Autumn . . . | 758.5 | 773.5 | 743.7 | 7.7 | 13.6 | 9.3 |
| | Frosty Days. | Rain. | | Snowy Days. | Number of Gales. | No. of Earth-quakes. |
| | | Quantity in mm. | Days. | | | |
| 1876 | | | | | | |
| September . | — | 182 | 20 | — | — | 1 |
| October . . | — | 119 | 10 | — | 1 | — |
| November . | 3 | 221 | 13 | 5 | — | — |
| December . | 14 | 108 | 20 | 5 | — | 1 |
| 1877 | | | | | | |
| January . . | 12 | 84 | — | 21 | 1 | — |
| February . . | 13 | 126 | 3 | 17 | — | — |
| March . . . | — | 78 | 9 | 6 | — | — |
| April | — | 39 | 11 | 3 | — | — |
| May | — | 73 | 19 | — | 1 | — |
| June | — | 90 | 13 | — | — | — |
| July | — | 49 | 13 | — | 1 | — |
| August . . . | — | 118 | 15 | — | 2 | — |
| September . | — | 97 | 10 | — | 2 | — |
| October . . . | — | 168 | 17 | — | 2 | 1 |
| November . | — | 163 | 7 | 15 | — | 1 |
| December . | 10 | 68 | 2 | 20 | — | 2 |
| Year | 35 | 1153 | 109 | 82 | 9 | 4 |
| Winter . . . | 35 | 318 | 23 | 43 | 1 | 1 |
| Spring . . . | — | 190 | 39 | 9 | 1 | — |
| Summer . . . | — | 257 | 41 | — | 3 | — |
| Autumn . . . | — | 428 | 34 | 15 | 4 | 4 |

141° 22' 49" E. LONG., HEIGHT ABOVE THE SEA 23 METRES.
IN THE AGRICULTURAL COLLEGE, COLLATED AND REDUCED BY O. DERSCH.

| (Celsius.) | | Extremes. | | Relative Moisture in %. | | | Clouding 0-10. | Frosty Nights. |
|------------|----------|-----------|------------|-------------------------|--------|--------|-------------------|-------------------|
| Mean. | Maximum. | Minimum. | Amplitude. | 7 a.m. | 2 p.m. | 9 p.m. | | |
| 16.1 | 30.2 | 6.6 | 23.6 | 89 | 71 | 87 | 6.1 | — |
| 9.5 | 18.8 | — 1.1 | 19.9 | 88 | 65 | 83 | 4.8 | 1 |
| 2.1 | 11.3 | — 9.5 | 20.8 | 85 | 78 | 83 | 7.4 | 21 |
| — 2.6 | 4.7 | — 14.7 | 19.4 | 81 | 73 | 78 | 6.2 | 31 |
| — 1.5 | 5.0 | — 15.5 | 20.5 | 74 | 70 | 73 | 7.2 | 30 |
| — 2.1 | 10.2 | — 13.3 | 25.5 | 76 | 67 | 75 | 6.0 | 28 |
| 1.2 | 9.8 | — 8.6 | 18.4 | 76 | 70 | 78 | 6.2 | 27 |
| 6.3 | 21.6 | — 3.4 | 25.0 | 77 | 58 | 73 | 4.9 | 12 |
| 9.4 | 21.8 | — 0.1 | 21.9 | 76 | 64 | 79 | 6.3 | 2 |
| 16.2 | 28.2 | 6.2 | 22.0 | 80 | 64 | 83 | 6.0 | — |
| 20.7 | 32.4 | 7.2 | 25.2 | 85 | 69 | 86 | 6.6 | — |
| 22.2 | 31.0 | 12.7 | 18.3 | 82 | 65 | 84 | 6.4 | — |
| 16.6 | 26.1 | 4.5 | 21.6 | 85 | 64 | 84 | 4.1 | — |
| 10.4 | 21.8 | — 0.5 | 22.3 | 85 | 64 | 85 | 5.9 | — |
| 2.3 | 13.2 | — 5.6 | 18.8 | 80 | 70 | 82 | 7.4 | 21 |
| — 1.7 | 8.9 | — 14.4 | 23.3 | 74 | 65 | 72 | 6.1 | 30 |
| 8.3 | 32.4 | — 15.5 | 47.9 | 79 | 66 | 79 | 6.0 | 148 |
| — 2.1 | 10.2 | — 15.5 | 25.7 | 77 | 70 | 75 | 6.5 | 89 |
| 5.6 | 21.8 | — 8.6 | 30.4 | 76 | 64 | 77 | 5.7 | 41 |
| 19.7 | 32.4 | 6.2 | 38.6 | 82 | 66 | 84 | 6.3 | — |
| 9.8 | 26.1 | — 14.4 | 40.5 | 83 | 66 | 81 | 5.8 | 51 |

Frequency of Winds.

| N. | N.E. | E. | S.E. | S. | S.W. | W. | N.W. |
|----|------|-----|------|-----|------|----|------|
| 9 | 2 | 7 | 33 | 15 | 4 | 4 | 12 |
| 14 | 1 | 10 | 21 | 14 | 6 | 5 | 23 |
| 8 | 4 | 1 | 19 | 13 | 9 | 8 | 19 |
| 7 | 2 | 4 | 28 | 11 | 5 | 9 | 20 |
| 10 | 6 | 6 | 12 | 16 | 2 | 7 | 24 |
| 5 | 1 | 5 | 14 | 11 | 7 | 7 | 27 |
| 9 | 3 | 10 | 19 | 11 | 2 | 4 | 27 |
| 7 | 2 | 13 | 22 | 8 | 9 | 5 | 20 |
| 4 | 2 | 11 | 30 | 8 | 5 | 9 | 13 |
| 5 | 6 | 13 | 17 | 10 | 5 | 3 | 14 |
| 10 | 4 | 14 | 33 | 9 | 3 | 4 | 11 |
| 5 | 3 | 13 | 41 | 16 | 2 | 3 | 10 |
| 2 | 5 | 8 | 31 | 15 | 5 | 4 | 14 |
| 4 | 6 | 11 | 21 | 20 | 7 | 3 | 12 |
| 3 | 4 | 5 | 17 | 17 | 7 | 10 | 20 |
| 18 | 5 | 6 | 8 | 17 | 7 | 9 | 20 |
| 82 | 47 | 115 | 265 | 158 | 61 | 68 | 212 |
| 22 | 9 | 15 | 54 | 38 | 14 | 22 | 71 |
| 20 | 7 | 34 | 71 | 27 | 16 | 18 | 60 |
| 20 | 13 | 40 | 91 | 35 | 10 | 10 | 35 |
| 9 | 15 | 24 | 69 | 52 | 19 | 17 | 46 |

IX. THE TAIFÚN AT NAGASAKI IN THE NIGHT OF
20TH TO 21ST AUGUST, 1874.

OBSERVED AT 47 METRES ABOVE THE SEA AND THE OBSERVATIONS REDUCED TO
THE SEA LEVEL BY DR. A. GEERTZ.

| Day. | Hour. | Wind. | | Air Pressure in mm. | Temperature Cels. | Remarks. |
|---------|------------|-------------|----------------|------------------------|----------------------|----------------------------|
| | | Direction. | Force. 1-12 | | | |
| 20 Aug. | 6 a.m. | E. | 6 | 759°0 | 22°0 | |
| " | 6 p.m. | E. | 8 | 743°5 | 26°8 | Threatening, Barometer |
| " | 10 p.m. | E. | 10 | 738°1 | 26°7 | fallen 15°53 mm. in 12 hh. |
| " | 11 p.m. | E.S.E. | 10 | 735°1 | 26°4 | Heavy rains and showers, |
| " | 11.30 p.m. | S.E. | 11 | 730°0 | 26°0 | stormy. |
| " | 12 " | S.S.E.-S. | 11-12 | 724°9 | 26°7 | Ditto. |
| 21 Aug. | 12°15 a.m. | S.S.E.-S. | 12 | 721°1 | 26°6 | The Taifún begins from |
| " | 12°30 " | S. | 12 | 720°1 | 26°0 | SE. |
| " | 12°45 " | S.S.W. | 12 | 719°8 | 26°4 | Storm increases, heavy |
| " | 1 — " | S.W. | 12 | 722°1 | 26°1 | wind and rain-squalls. |
| " | 1.10 " | S.W.-W.S.W. | 12 | 724°9 | 25°4 | Ditto, wind turning south- |
| " | 1.20 " | W.S.W. | 12 | 726°9 | 25°3 | ward. |
| " | 1'30 " | S.W.-W. | 12-11 | 728°7 | 25°2 | Lowest state of baro- |
| " | 1.40 " | W. | 11-12 | 731°0 | 25°1 | meter, storm very |
| " | 1.50 " | W.N.W. | 12-11 | 732°0 | 25°3 | violent, doing great |
| " | 2 — " | W.N.W.-N.W. | 11 | 734°0 | 25°3 | damage. |
| " | 2.10 " | N.W. | 11 | 735°6 | 25°2 | Wind passes to the SW. |
| " | 2'20 " | N.W. | 11-10 | 737°6 | 25°2 | Wind passes to WSW. |
| " | 2'30 " | N.N.W. | 10 | 738°6 | 25°1 | The Wind turns to S.W. |
| " | 3 — " | N.N.W. | 10 | 740°2 | 25°0 | Wind turns to W. |
| " | 4 — " | N.N.W. | 10 | 746°5 | 25°1 | Ditto. |
| " | 7 — " | W.S.W. | 8 | 751°8 | 25°5 | Ditto. |
| " | 9 — " | S.W. | 7 | 757°9 | 25°5 | Wind turns further to |
| | | | | | | WNW. |
| | | | | | | Wind passes over to NW. |
| | | | | | | Ditto. |
| | | | | | | Ditto. |
| | | | | | | Wind passes over to |
| | | | | | | NNW. |
| | | | | | | Wind blows from NNW. |
| | | | | | | Ditto. |
| | | | | | | Wind springs to WSW. |
| | | | | | | and finally round to |
| | | | | | | SW., becomes weak. |

VII.

THE FLORA OF THE JAPANESE ISLANDS.

A. DURATION OF THE PERIOD OF VEGETATION.

WE have said something already of the wealth, the great variety and luxuriance of Japanese vegetation, which make the country the most interesting outside the tropics to the botanist and botanical-geographer.¹ It is not surprising, therefore, that from the days of Engelbert Kaempfer to the present, to no part of the natural phenomena of Japan has so much attention and intellectual effort been devoted, as to its Flora. Most of the eminent men of science who have visited Japan were botanists, and collected and described its plants: Kaempfer, Thunberg, v. Siebold, Bürger, and various other physicians and pharmacutists in the service of the Dutch Company, principally around Nagasaki; Maximowicz in the same locality, near Yokohama, Hakodate, Fuji-san, and elsewhere; Savatier, Vidal, and Dickins, in the district of Kuwantô; Wright and Hodgson in the neighbourhood of Hakodate; and amongst those whose field of observation and collection was unusually extensive, and in particular included the vegetation of the high mountains, besides Kramer I will venture to name myself. And these numerous names are far from exhausting the long list of those who have contributed to the extension of our botanical knowledge of this island kingdom. There are, besides, the names of men like Zuccarini, Miquel, Grisebach, Asa Gray, Sir William and Sir Joseph D. Hooker, and moreover Maximowicz, who have partly aided in the classifying and identifying what the former had collected, and at the same time have undertaken the much more difficult task of ascertaining the manifold relation of the vegetable world of Japan to the Floras of other countries.

Another reason why the Flora of Nihon was longest and best known, before other portions of its natural phenomena were sufficiently studied, lies in the numerous and close relations of the natives to the vegetable world. The ancient Chinese system of medicine in particular, which was followed until the restoration, required a knowledge and precise identification by name and form of hundreds

¹ In the present and following observations we have principally in view the four great islands, as essentially different conditions meet us in the island-groups running far to the south or north.

of plants, and a highly developed love of nature, especially a capacity for enjoying beauty in flowers, did the rest. No other people in the world, except the Chinese, has so old and elaborate a vegetable nomenclature as the Japanese. These popular names for so large a number of wild plants are one of the best proofs that an appreciation of nature and keen observation were here very early developed. Thus Thunberg found Japanese herbals with good illustrations, one in particular amongst them, Kwawi, being pre-eminent, though it was followed later by several other works, such as Sôroku Zusetsu and Honzo Zufu. Of the still living native botanists of Japan who have rendered great service in promoting a better knowledge of the plants of their country, I may name the respected Ito Keiske, who has preserved with his silver hair the freshness and energy of youth, which enabled him several decades ago, as a young man, to render such essential assistance to v. Siebold.

The long continuance of the cold season limits the period of vegetation of *most* plants in Yezo to five months, in middle Japan to six, and in the south to seven months of the year, and interrupts the growth of all woody plants, even that of evergreens. They all exhibit, therefore, as happens in all countries with low winter temperatures and a regularly recurring period of suspended growth, distinct year-rings, and the islands produce only a few heavy woods, and these only in the more southern parts, as the wood of *Buxus*, *Distylium racemosum*, and evergreen oak.

It has been pointed out as an instance of the peculiarities of Japan that here, besides the bamboo-cane, the palm and the laurel-leaved evergreen oak, the northern pine flourishes, and the deciduous tree-types of our forests are found, while in the animal world the bear is found as well as the ape. In some respects this is correct, though with reference to the palm as well as the bamboo-cane, it must be added, that they are only found as a result of cultivation northwards as far as the Bay of Yedo, and in some places still higher, and not in a wild state. This is still more emphatically the case with *Cycas revoluta* Thbg., which even in southern Kiushiu only exceptionally develops flower and fruit, while in Tokio it is protected against the night frosts of winter by being wrapped in straw.

The fruit of the *Agrumen* ripens to the north of the 34° of latitude only in a few sheltered places, and the splendid mandarin-oranges, which are sold cheaply in Tôkiô market in quantities, come from the warm valleys of Kiushiu on Linschoten Straits.

The botanical-geographer will see that, under such circumstances, even in Kiushiu the cultivation of the sugar-cane in the ordinary sense is quite out of the question; and, in fact, where this plant is cultivated in small quantities in Southern Japan, as in Owari, Tosa, Satsuma, and other warm provinces, the practice is to plant runners in the soil in the third month of the year, and to

reap the canes in the ninth month, or after barely six months of vegetation.

When at the end of September the rice-fields lose their green, and the jay flies shrieking about the groves and forest outskirts, the mountain forests also array themselves in other colours. Their autumn tints surpass in beauty and variety of pattern and colour the boasted vesture of the North American forests. In particular, oaks and wild prunus, relatives of our cherry-trees, such as *Prunus Pseudo-cerasus*, wild vines, and sumachs, especially the climbing *Rhus Toxicodendron*, various species of maple, the *Dôdan* (*Enkianthus Japonicus* Hook. in autumn when its leaves turn red, together with *Acer polymorphum*, the chief ornament of Japanese gardens), birches and other trees exhibit in their foliage an extremely brilliant mixture of colours from deep brown through purple to yellow and white; and when to these numerous tints of dying leaves and others of the ripe fruits the deep dark green foliage of evergreen shrubs and trees are added, as is the case more to the south, the picture exhibits still greater contrast and variety.

Towards the end of October, the deciduous woods are bare, as with us, and there are only a few plants which have not entered upon their winter rest. These are chiefly evergreen shrubs and trees which have already formed their buds against the autumn, and do not require a high temperature, but only daily sunshine for the unfolding of their leaves, so that their florescence occurs in the first months of winter. Amongst them are *Olea aquifolium* S. and Z., *Aralia japonica* Thbg., and some other *Araliaceæ*, which blossom in November, *Thea chinensis* Sims. and *Camellia Sasanqua* Thbg., whose blossoming time is in November and December, and whose last buds are destroyed by the night frosts, some kinds of *Daphne*, which flower in January and December; and, above all, *Camellia japonica*, which at this time presents sometimes the surprising spectacle of flowers and snow upon the same plant, and whose flowering time is prolonged even until April.

Amongst the herbs we find still fewer species whose flowering time falls in late autumn or extends into winter proper, as with some *Composita*, in particular with *Pyrethrum* and *Aster*. The grass loses its green colour in the cold season much more than with us, and appears greyish-brown and dead.

At the beginning of April, even in the southern parts of the country, as in the neighbourhood of Seto-no-uchi-umi, vegetation is still very backward. One of the favourites of the Japanese people, the mume-plum (*Prunus Mume* S. and Z.) has indeed, in the gardens and temple-courts, for six weeks been covered with white or rose-coloured blossoms, and like the yellow bells of the *Forsythia suspensa* Vahl announced the spring and the awakening of nature, but only a few plants, such as *Isopyrum adoxoides* DC., *Magnolia stellata* Maxim., *Berberis sinensis* Desf., *Corydalis Wilfordii* Reg., *Draba nemoralis*, *Capsella Bursa pastoris* Moench.,

Amygdalus persica L., *Rubus corchorifolius* L., *Chrysosplenium macrostemon* Cham., *Distylium racemosum* S. and Z., *Hamamelis japonica* S. and Z., *Aucuba japonica* Thbg., *Taraxacum officinale* Wigg., *Veronica agrestis* and *Veronica hederæfolia*, *Lamium amplexicaule*, *Ulmus campestris* and *Narcissus Tazetta* L., follow their example in February or March. The number of flowering plants rises indeed in April, yet still remains under 3 per cent. of the entire Flora. Besides several of the plants already mentioned, I found at the end of March, 1875, in the neighbourhood of Kiôto, in flower: *Illicium religiosum* L., *Euptelea polyandra* S. and Z., *Skimmia japonica* Thbg., *Eurya japonica* Thbg., *Parapyrola trichocarpa* Miq., *Chrysosplenium alternifolium* B., *Mercurialis leiocarpa* S. and Z., *Oxalis acetosella* L., *Bothryspermum tenellum* Mey, *Corydalis aurea* Willd., *Clematis Williamsii* As. Gr., *Coptis quinquefolia* Miq., *Andromeda japonica* Thbg., *Camellia japonica* L., *Populus tremula* L. and *Petasites spurius* Reich., *Cymbidium virens* Ldl., *Heloniopsis japonica* Maxim., *Asarum variegatum* Al. Br., *Arum japonicum* Bl.

The most important winter crops, barley, wheat and rape, which are sown in rows at the end of October, show a vigorous blade in November and the beginning of December, and cover the fields through the winter with a beautiful green. Towards the middle of December, however, even in temperate Japan their development ceases and rests until the warm sun of spring wakes it again. In the plain of Ôsaka rape shows its first bloom at the beginning of April; near Nagasaki, its development at the same time is about fourteen days more advanced. There, as everywhere in Southern and Middle Japan, its ripening, as that of barley, takes place in the beginning of June, while the wheat harvest follows about two weeks later. The period of development for wheat is in Japan nearly two months longer than in Malta in the same latitude, viz. 210 days as compared with 160, because there a pause of several months occurs, while here even the coldest day of 10° C. is still warm enough to stimulate growth.

The considerable differences which frequently appear in early summer in the period of blossoming and ripening of the fruit of the same kind of plants, according to the latitude in which they grow, do not exist, or do not exist in the same degree in Japan as in Europe. with regard to those species which blossom and ripen their seed in late summer and autumn. It appears, therefore, that here also the increased amount of sunshine in higher latitudes in the height of summer, due to the longer duration of the days, is a powerful compensation in favour of development. That this compensation, however, does not affect the early flowering plants is principally due to the fact that, besides the duration of sunshine, the amount of heat received also comes into account, and this in higher latitudes only attains much later to the lower limit necessary for the growth of the plant.

How the low temperatures of the long winter retard vegetation, as compared with the Mediterranean region, is shown also in the case of a Japanese fruit-tree, the Loquat (*Eriobotrya japonica* Lindl.), which the English have transplanted to their tropical and subtropical colonies, and whose fruits ripen in Gibraltar as early as the end of April, while in Ōsaka and Tōkio they only come to market in the beginning of June.

In the north of Japan the winter, as in the countries with a continental climate, grows quickly into summer, and the woods in a brief space of time are green again; in the south this transition takes place very gradually. In the island of Amakusa and the neighbouring Kiushiu most of the deciduous trees were already covered with foliage in the second half of April (1875); *Rhus succedanea* L. and *Castanea vulgaris* Lamk. had partly developed their young leaves, and only *Albizia Julibrissin* Bow. (*Mimosa arborea* Thbg.) still displayed their winter aspect unaltered, and even a month later, in the middle of May, we found this little tree, in the mountain forests of Shikoku, at a height of some 800 metres, quite leafless, so that its Japanese name, "Nemu, sleeper," suits it for other reasons than merely the sensibility of its leaves and its sleeping during the night.

But in Southern Japan, besides the gradual transition of the two extreme seasons into each other, there is yet another reason why the beginning of summer is not particularly surprising. It is that the deciduous trees of the woodlands and groves are here too much mingled with evergreens for their new foliage to be specially striking. Moreover, the winter-green trees and shrubs, including the bamboo-cane, about this time go through a sort of moulting. Their old leaves have lost their accustomed glossiness and die off, giving place to young leaves, which are at first bright green, as in the camphor-tree, or whitish and reddish, as in various evergreen oaks, and only gradually pass into deep, glossy dark green.

At the beginning of May, when the fields are full of summer fruits and the flute-like song of the Unguisu (*Cettia cantans* T. and S.) sounds from the freshly-foliaged thicket, full summer has come, and now under the powerful influence of the sun, coupled with plenteous and frequent rain-showers, the vegetation begins to develop that manifoldness and luxuriance which remind us of the tropics, and can be found nowhere in the Mediterranean region. To these warm, fertilizing summer-rains Japan owes its rich summer culture and the possibility of reaping from the same field two harvests in the year.

B. FORMATIONS AND REGIONS OF VEGETATION.

Although the four great islands, Kiushiu, Shikoku, Hondo, and Yezo, and besides these the southern part of Saghalien, are intimately connected in their position and the essential character of their vegetation, yet, as has been sufficiently shown, they do not

from either climatically or orographically a whole. The following accounts of the geographical distribution of plants relate principally to the three southern islands, as I have no knowledge of Yezo from personal observation, and the Flora of the island has not been worked out sufficiently for me to use it everywhere for purposes of comparison.

Within a geographically determined botanical region we find as a result of considerable differences in the geological constitution of the soil, in proportion to the moisture and heat which characterise it, that the plants are grouped in accordance with their different requirements, and thus are produced physiognomically different sections of the country, which may be called vegetation-pictures or vegetation-formations. In reference to this we may distinguish in Japan the Flora of the sand-dunes, the vegetation of the fresh waters, of the Hara, of the bush and hill-country, of the mountain-forest, and of the highlands.

The Flora of the Japanese sand-dunes, influenced and determined by the dune-sand and salt-dust of the sea-water, is indeed not very rich in species, nor everywhere the same, yet is characterised by some general properties and a number of very frequently occurring plants. Many follow in their growth the character of most sand and salt plants in general, and develop either a strong, deep-penetrating network of roots, while the parts above the earth are low and rather inclined to spread along the ground, or their thick fleshy leaves give them the character of succulent plants. The Japanese names of these shore-plants are almost always compounds of the word hama (a flat sandy shore), and the names of other plants, which they more or less recall. The following is a list of the species to be included here :—

Arabis perfoliata Lam., *Dianthus japonicus* Thbg., *Honckenya peploides* Ehrbg., *Eurya chinensis* R. Br., *Hibiscus Hamabo* S. and Z., *Tribulus terrestris* L., *Paliurus Aubletia* R. and Sch., *Lathyrus maritimus* Big., *Canavalia lineata* DC., *Rhaphiolepis japonica* S. and Z., *Phellopterus littoralis* Sr. and Sch., *Selinum japonicum* Miq., *Angelica Kiusiana* Maxim., *Peucedanum japonicum* Thbg., *Aster Tripolium* L., *Eclipta alba* Hask., *Wedelia calendulacea* Less., *Leucanthemum arcticum* DC., *L. nipponicum* Fr. and Sav., *Pyrethrum marginatum*, *P. Decaisneanum* Maxim., *Artemisia capillaris* Thunbg., *A. japonica* Thbg., *Gynura pinnatifida* DC., *Ixeris repens* A. Gray, *I. integra* Miq., *Calystegia soldanella* Br., *Tournefortia Arguzia* R. and Sch., *Mertensia maritima* Don., *Linaria japonica* Miq., *Lippia nodiflora* Rich., *Vitex trifolia* L., *Statice japonica*, *Chenopodium acclimatum* Willd., *Atriplex littoralis* L., *A. Gmelini* May, *Kochia scoparia* Schrad., *Schoberia maritima* Miq., *Salsola soda* L., *Polygonum maritimum* L., *Juniperus littoralis* Maxim., *Crinum asiaticum* L., *Carex macrocephala* Willd., *C. Satsumensis* F. and S., *C. Bongardi* Boott., *C. pumila* Thbg., *Polypogon littorale* Sim.

Of these the important ones are: *Rosa rugosa* (Hama-nashi, or shore-pear), *Juniperus littoralis* (Hama-matsu, *i.e.* Dune-pine), *Lathyrus maritimus* Bigel (Hama-endo, or Dune-pea), *Calystegia soldanelloides* (Hama-hirugao, or Dune-bindweed), *Selinum japonicum* (Hama-ninjin, or Shore-carrot), *Carex macrocephala* (Hama-mungi, or Dune-barley).

The rose and the juniper are, especially on the northern coasts, extraordinarily plentiful. The large red flowers of the former are succeeded by good sized flat spheroidal or pear-shaped haws, which the natives, Ainos as well as Japanese, are fond of eating. The seaside juniper has a very bizarre shape, and presents a sharp contrast, especially in the cold season, with its deep-green needles and large berries with their bluish bloom, to the dun sand and the generally withered vegetation.

Where the shore reclaimed from the waves of the sea has attained, by the settling of the plants just mentioned, the necessary hold, it is made use of for the purpose of planting the *Pinus Massoniana* S. and Z. (Kuro-matsu, *i.e.* black pine), as has happened, for instance, between Niigata and the sea, on the coast of Tôtomi, as well as in many other places. The hardihood of this tree far surpasses that of the Aka-matsu, or red pine (*Pinus densiflora* S. and Z.), which would hardly maintain an existence in such sandy infertile places.

MARSH AND WATER PLANTS.

Japan has neither heaths nor moors. The characteristic vegetation of the former is not found, and the peat mosses of the latter (*Sphagnum*, *Leucobryum*) are limited to comparatively so few and unimportant parts of the country, that one may make mountain-tours for months together without meeting with them. Accordingly the plants associated with our bogs and moors are either wanting altogether, as *Pinguicula*¹ (whose type is represented by *Heloniopsis*), *Tofieldia*, *Scheuchzeria*, or they are like *Drosera rotundifolia*, *Ledum palustre*, *Rubus chamaemorus*, *Andromeda polifolia*, and others, rather confined to the northernmost part of the country and a few mountain summits.

A peculiar vegetation is developed on and in the muddy water of the rice-marshes, and similar stagnant waters. Here we observe above all, besides the familiar starwort (*Callitriche verna* L.), the *Azolla pinnata* R. Br., which like its near relative the *Salvinia vulgaris* Michx., often covers large spaces of this water-surface,

¹ "In the summer of 1881, Dr. E. Satow, Secretary of the British Legation, made the interesting discovery that *Pinguicula vulgaris* L. β . *macrouros* Maxim. (*P. macrouros* Ledeb.) grows on Yatsugatake. According to a communication from Maximowicz, the well-known Academician of St. Petersburg, to the author of this work, it has also been found in Nambu and Eastern Siberia. Specimens from Livonia exhibit the same long spur as the Japanese variety."

and especially in late autumns, after the harvest, is very commonly found. The names of the remaining plants which have chiefly settled in the flooded rice-fields and their irrigation-trenches, may be mentioned in systematic order: *Elatine alsinastrium* L., *E. triandra* Schk., *Ammannia verticillata* L., *A. japonica* Miq., *Ludwigia ovalis* Miq., *L. prostrata* Roxb., *Myriogyne minuta* Less., *Vandellia angustifolia* Benth., *V. erecta* Benth., *V. pachypoda* Fr. and Sav., *Polygonum Posumbu* Hmlt., *Alisma Plantago* L., *Sagittaria pygmaea* Miq., *Blyxa Roxburghii* Rich., *Ottelia alismoides* Pers., *O. japonica* Miq., *Monochoria vaginalis* Presl., *Pontederia plantaginea* Kunth. (of the last the variety *Cordifolia* is especially common, and that too in the marshes and ponds of Yezo, according to Böhmer's reports): *Juncus alatus* F. and S., *Cyperus pygmaeus* Rottb., *C. paniciformis* F. and S., *C. difformis* L., *C. truncatus* Turcz., *Beckmannia erucæformis* Host., *Isachne australis* R. Br.

The most noteworthy plants which we find on the surface of the tanks that are frequently attached to temples, or constructed as reservoirs for the irrigation of rice-fields, as well as in similar natural water basins, are pond-weed and water nuts (*Potamogeton natans* L., *P. crispus* L., *P. polygonifolius* Pourr., *P. hybridus* Michx. and *Trapa bispinosa* Roxb.). More rarely, and more in the southern parts of the country, we find *Nuphar japonicum* DC. and *Nymphæa tetragona* Georgi, while the other *Nymphæaceæ* either, as *Brasenia peltata* Pursh. and *Euryale ferox* Salisb., confine themselves to particular districts, or like the charming *Lotos-flower* (*Nelumbo nucifera* Gaertn.) owe their existence to cultivation, and obviously only came into the country with Buddhism. *Brasenia peltata* Pursh. (in Japanese *Junsai*, *Limnanthemum peltatum* Griseb.) is said to be very plentiful in the shallow lakes of Yezo, and to cover entirely the Ô-numa or "great marsh" in Ôshima.

Of the batrachian crowfoots only one species occurs, and that by no means frequently, chiefly in slowly flowing water, viz. *Ranunculus Drouetti* Schultz. Besides we observe on the margins of standing and slowly flowing waters principally the following, for the most part seldom occurring, species: *Montia fontana* L., *Myriophyllum verticillatum* L., *M. spicatum* L., *Inula*, *Villarsia crista Galli* Grsb., *Menyanthes trifoliata* L., *Limnanthemum nymphoides* Lk., *Veronica Anagallis* L., *Sparganium longifolium* Turcz., *Lemna* sp., *Spirodela polyrhiza* Schl., *Najas major* All., *N. minor* All., *N. serripstipula* Maxim., *Sagittaria sagittæfolia* L., *Hydrilla verticillata* Casp., *Vallisneria spiralis* L., *Hydrocharis asiatica* Miq., *Alpinia japonica* Miq., *Cyperus complanatus* Presl. and other species, *Scirpus* in many species, *Isolepis* sp., *Paspalum brevifolium*, *Phragmites communis* Trin., *P. Roxburghii* Kunth., of which principally the last two are very widely spread, especially in the irrigation-trenches of the rice-fields.

THE UNDERWOOD OF THE HILL-DISTRICTS.

Undulating hill-districts in which tillage must be confined to narrow valleys and little hollows are very common in Japan. The rounded hills and the vegetation which lends them their peculiar character rise as a rule only 100–300 metres above the sea. They are of very various origin. In some cases, as *e.g.* in the hilly region which embraces considerable parts of the provinces of Mino, Mikawa, Owari and Omi, the heights consist principally of clay and sand, the insoluble products of the disintegration of a much weathered granite rock which are frequently overlaid with diluvial gravel, or they consist of gritty slates that are perhaps like the chalk at Akasaka to be assigned to the coal-formation. Elsewhere, as on the Bays of Yedo and Sendai, neo-tertiary formations are a good deal developed and are often abundantly overlaid with lapilli and volcanic ashes. Raised by sæcular elevation and divided by extensive erosion, hills have been formed here which wear an entirely similar vesture of plants. Chains of hills also frequently occur, which belong entirely to the older schist mountains.

As regards the botanical character of all these hills, whatever may be their geological structure, they are covered either with light woods of pine, principally *Pinus densiflora*, or with low brushwood, and in places are quite bare. The barrenness and dryness of the soil is sufficiently shown by the generally crippled development of pines (*Pinus densiflora* and *Pinus Massoniana* S. and Z.) and other trees, as well as the predominance of brakes (*Pteris aquilina* L.) and China brier (*Smilax China* L. and other species).

Evergreen shrubs such as *Juniperus rigida* S. and Z., *Eurya japonica*, *Aucuba japonica* Thbg., *Photinia villosa* DC., *Pittosporum Tobira* Ait., *Gardenia florida* L., and others are in Middle Japan freely intermixed with deciduous shrubs, such as Azaleas, *Vaccinias*, *Deutzias*, *Roses*, *Rhus sylvestris* S. and Z., with grasses, herbs and ferns that love dryness; and when in early summer everything is green and blooming, and the smell of the resin mingles with the perfume of the flowers, and the grating and chirping of innumerable cicadas from the trunks and branches of the pines down to the humming and buzzing of honey-gathering insects, these otherwise less attractive districts offer also animated and instructive pictures. Thus in Satsuma, *e.g.* as early as April, the low barren hills are covered with a mixture of red-flowered Azalias (*Rhododendron indicum*) and white-flowered *Deutzias*, the *Anemone cernua*, which recalls our pasque-flower, *Osmunda regalis* and other plants, the arrangement of the vegetation appearing at the first glance to be artificial rather than a free product of nature.

THE HARA.

In the bottom of the valleys and small plains every spot of arable land is most carefully made use of, principally for growing rice. Of meadows and pasture-land, in our sense, there is as little as of fallow land. The original physiognomy of nature and wealth of vegetation have here disappeared and retreated to higher-lying districts inaccessible to water, and not subject to tillage. To learn therefore the principal habitats of grasses and herbs we must go to the Hara, or into the woods. The former is a peculiar vegetable formation, a sort of prairie, which is exceedingly common, and is found at the most various elevations from 100-2,500 metres, and which chiefly recalls our woodland and mountain meadows. At the bases of great volcanoes, such as Asama-yama, Fuji-no-yama, Ganju-san, and many others, it embraces a wide area, running at a height of from 500 to 1,500 metres, and might be made very useful for breeding cattle, although until recently this has been done only to a very small extent.

The Hara, and the mountain woodland which is generally connected with it, are the homes of that exceedingly varied and highly interesting mixture of numerous types of plants in which Japan is so rich; and no one who has not spent some time on this strikingly variegated floor of living mosaic, can form a correct idea of the grouping of Japanese plants. The Hara is chiefly distinguished from our meadows by the fact that it does not exhibit thick masses of grass. The various mixture of grasses, herbs, and under-shrubs as well as a few ferns, which inhabit it, is pretty loosely distributed, and is nowhere compacted into a dense tangle. It is a "O hana batake" (great flower field), as a Hara is characteristically called in the mountains of Nikkô, on the way from Lake Chiuzenji to Yumoto, in which we recognise many a dear old friend of our mountain meadows, or near relatives to them, oddly associated with many favourite ornamental plants, and numerous entire strangers to us.

Amongst the principal European plants are especially: various violets (*Viola Patrinii* DC., *V. japonica* Langsd., *V. Reichenbachiana* Jord.) and a milkwort (*Polygala japonica* Houth.), brown burnet (*Poterium tenuifolium* Fisch.), hare's ear (*Bupleurum falcatum* L.) and pimpernel (*Pimpinella magna* L., *P. sinica* Hance), various worts (*Galium verum* L., *G. boreale* L., *G. pogonanthum* F. and S., *G. trachyspermum* L.), light blue Scabiosa (*Scabiosa japonica* Miq.), a number of Compositæ (*Arnica angustifolia* Vahl, *Senecio campestris* DC., *S. Kaempferi* DC., *S. clivorum* Maxim., *S. flammeus* DC., *Saussurea gracilis* Maxim., *S. triptera* Maxim., *S. japonica* DC., *Serratula coronata* L. and others), bluebells (*Platycodon grandiflorum* DC., *Campanula punctata* Lam., *Adenophora verticillata* Fisch.), the common eye-bright (*Euphrasia officinalis* L.), all-heal (*Prunella vulgaris* L., *Prunella grandiflora* Jacq.) and bugle (*Ajuga*

genevensis L.), sorrel (*Rumex acetosa* L.) and hart's tongue (*Polygonum bistorta* L.), flax (*Linum stelloides* Pl.) and toad flax (*Thesium decurrens* Bl.); further of Monocotyledons: various Orchideæ (*Habenaria*, *Cephalanthera*, *Platanthera*, *Listera*, and above all *Spiranthes australis* Lindl.), woodrushes (*Luzula campestris* DC.), reeds (*Carices*) and a number of grasses (*Agrostis perennans* Tuckerm., *Calamagrostis robusta* F. and S., *Aira flexuosa* L., *Trisetum cernuum* Trim., *Poa pratensis* L., *Koeleria cristata* Pers., *Andropogon Schœnanthus* L.) and of ferns, *Ophioglossum vulgatum* L., *Osmunda regalis* L. and *Pteris aquilina* L.

On the other hand, we miss in the Hara almost all the Crow-foots and Pinks of our meadows, besides many Papilionaceæ (*Trifolium*, *Medicago*, *Melilotus*, *Genista*, *Ononis*, *Anthyllis*, *Lathyrus*). Especially striking too is the absence of a series of familiar Compositæ (*Hieracium*, *Hypochœris*, *Scorzonera*, *Crepis*, *Cineraria*, *Bellis*, and *Chrysanthemum*), of thyme and heath, as well as of a number of the commonest meadow grasses (*Anthoxanthum*, *Phleum*, *Alopecurus*, *Briza*, *Dactylis*, *Avena*, *Sesleria*, *Lolium*, and *Nardus*).

Amongst the strange characteristic plants of the Hara, the most conspicuous are the shrubby Papilionaceæ, *Lespedeza* and *Indigofera* in various species; here, moreover, is the home of many Sword-lilies and Lilies (species of the genera *Iris*, *Pardanthus*, *Lilium*, *Hemerocallis*, and *Funkia*) which with their great white, blue and yellow flowers constitute the special ornaments of this region. The same may be said of one of the handsomest and most popular grasses of Japan, the *Eulalia japonica* Trim. Here also we find not unfrequently the familiar *Pyrus japonica*, which as a very low shrub occurs also in dry ridges and in open underwood. This remark applies also, and in a higher degree, to *Azalias*, *Deutzias* and *Diervillas*, wild roses, such as *Rosa multiflora*, and various other shrubs.

It will be understood that the character of the vegetation of the Hara, which has here been described merely in its main features, varies essentially according to altitude and latitude. Thus in middle Japan the splendid blue-flowered *Kikiyo* (*Platycodon grandiflorum* DC.), the *Gibōshi* and *Midzu-Gibōshi* (*Funkia ovata* Spreng. and *F. lancifolia* Spr.) as well as the yellow-blossomed *Ominameshi* (*Patrinia scabiosæfolia* Link.) appear in numbers only at a height of about 1,000 metres, where *Scabiosa*, *Bupleurum*, *Kanzō* (*Hemerocallis flava* L.) and other lilies begin to be scarce. Somewhat higher still appear *Polygonum bistorta* L. and *P. Weyrichii* Schm., *Parnassia palustris*, *Deutzias* and *Diervillas*; here and there also *Aralia cordata* Thunbg. and *Bupleurum Sachalinense* Fr. Schm., *Gentianeæ*, *Trollius japonicus* Miq. and *Caltha palustris* L.

In the northern parts of Hondo, and also in the Japanese Snow Mountains, between Hida and Shinano, many a Hara bears numerous bushes of the large-leaved *Kashiwa* (*Quercus dentata* Thbg.) which rarely grow over 3 metres high and are so sparsely

scattered as not to influence the character of the vegetation. It was a surprise to me to see the quantities of our lily of the valley (*Convallaria majalis* L.) on the sunny Hara at the foot of Ganju-san, near Morioka, which had hitherto been found only in Yezo under similar conditions, *i.e.* on open grass-land and not in the woods.¹

Where the Hara broadly girdles the bases of mighty volcanoes and is crossed by deep-cut valleys of erosion, the forest vegetation from above not unfrequently continues along these valleys for a great distance, as *e.g.* on the south-west side of Kirishima-yama in Kiushiu. The cause of this may lie partly in the natural shelter which trees and shrubs here find against storms, but is still more explained by the protection which is afforded them in autumn against the fires that sweep over the dry Hara.

In the valley-plains of the Ishikari and other great rivers in Yezo, we find on the contrary, instead of the open Hara, extensive park-like tracts, in which the growth of trees is concentrated along the river banks. According to the accounts, the ash, with the willow and the alder, is the prevailing tree. In dryer places these are accompanied by two kinds of elm, maples, chestnuts, walnuts and oaks, forming gradually the transition to the varied forest growth, which essentially preserves the same character as in the main island.

THE FOREST (HAYASHI).

There is no greater contrast between the forests of extra-tropical regions than that between the foliaceous forests of temperate Europe and those of Japan. Humboldt had already pointed out as the fundamental character of the former that they consist of a few kinds of trees, of genuine *plantæ sociales*, to which the small number of shrubby plants is modestly subordinate, but which shelter a considerable number of forest-loving herbs and grasses. Amongst the shrubs, climbing and creeping plants play a very subordinate part and occur only in a few species. The Japanese foliaceous forest (*Asa-ki*) on the other hand is composed of an extremely varied mixture of a great number of trees and shrubs of all ages, and it is only exceptionally that a few species of the former, as oaks and beeches, form by themselves complete forests of tall trees. Creeping and climbing plants, mostly distinguished by the Japanese names *Tsuta-no-ki*, *Kadzura* or *Tsuru*, parasitic and other ferns, together with numerous herbs, play a much greater part amongst the forest-dwellers, and remind us of the virgin forests of the tropics.

Sir Joseph Hooker, in a recent essay upon the distribution of plants illustrated in the *Flora of North America*, points out the surprisingly large number of variously mingled trees which he found,

¹ "It has since then been also found by Atkinson and Satow in the basin of the Chikuma-gawa (see 'Handbook for Central and Northern Japan,' p. 237)."

e.g. in the forests near St. Louis, and even on Goat Island at the Niagara Falls, within a limited space, and which in his opinion equal in variety those of the tropics. Now every botanist who has had the opportunity of comparing a Japanese mountain-forest at a height of between 600 and 1,600 metres, with a North American forest or the virgin forest of the tropics, will have no hesitation in saying that in this respect Japan far outstrips the Atlantic district of North America. From the foot of Nantai-san on Lake Chiuzenji to its summit I counted, without deviating from my course, ninety-seven kinds of trees and shrubs, and the botanist who traverses at the beginning of June the forests of the Hakone Mountains, Fuji-san, Haku-san, or any other luxuriant mountain-forest, may find in flower nearly a hundred kinds of trees, and shrubs of at least seventy genera. Thus, for instance, I observed in the forest near Ichinose at the foot of Haku-san, at a height of between 900 and 1,000 metres, on the 10th of July, 1874, within two hours, the following plants in full, or barely finished bloom: *Clematis japonica*, *Magnolia hypoleuca*, *Kadsura japonica*, *Trochodendron aralioides*, *Cocculus Thunbergii*, *Cleyera japonica*, *Actinidia platyphylla*, *A. polygama*, *Xanthoxylon piperitum*, *Ilex crenata*, *I. Sieboldi*, *Evonymus Hamiltoniana*, *Berchemia racemosa*, *Vitis labrusca*, *Æsculus turbinata*, *Acer capillipes*, *A. cratægifolium*, *Rhus sylvestris*, *Rh. Toxicodendron*, *Albizzia Julibrissin*, *Spiræa callosa*, *S. Blumei*, *Rubus rosifolius*, *Rodgersia podophylla*, *Hydrangea paniculata*, *Schizophragma hydrangeoides*, *Philadelphus coronarius*, *Acanthopanax ricinifolia*, *Fatsia horrida*, *Benthamia japonica*, *Cornus brachypoda*, *C. canadensis*, *Diervilla versicolor*, *Rhododendron indicum*, *R. semibarbatum*, *Ligustrum Ibot* and *Castanea vulgaris*.¹

To enumerate the constituents and inhabitants of the Japanese mountain-forests would be to name at least half of the entire flora. In the higher mountains and more to the north, we find only a few evergreen shrubs and no trees, conifers of course excepted. The principal constituents of such a deciduous forest are oaks, beeches, hornbeams, maples, birches, horse-chestnuts, magnolias, aralias, walnuts, elms, planes, various rosaceæ and, in moister places, also ashes and alders (*Quercus serrata* and *Q. dentata*, *Q. crispula* and *Q. glandulifera*, *Fagus Sieboldi* and *F. silvatica*, *Castanea vulgaris* and *Æsculus turbinata*, *Cercidiphyllum japonicum*, *Tilia cordata* and *T. mandschurica*, *Calopanax ricinifolia*, *Magnolia hypoleuca*, *Acer japonicum*, *A. pictum* and others, *Carpinus laxiflora*, *C. coradata*,

¹ As a proof how inaccurate, and even false, was our information on this very point, I cite Grisebach, *Die Vegetation der Erde*, vol. i. p. 497: "Aus dem klimatischen Einfluss der stärkeren Niederschläge ist (in Japan) nur das Vorkommen tropischer Formen, nicht aber die Mannigfaltigkeit der Arten und Gattungen zu erklären, um so weniger, als hier der Baumschlag in einem einzelnen Bestande nicht nach Art der Tropenwälder gemischt, sondern oft eben so einfach ist, wie in anderen Ländern unter gleicher Breite."

Planera Keaki Sb., *Ulmus campestris*, *U. montana*, *U. parvifolia*, *Prunus pseudo-cerasus*, *Pterocarya rhoifolia*, *Fraxinus longicuspis*, *Betula alba*, *Alnus* sp. and several others). Of the constituents here mentioned of a summer-green Japanese forest, *Magnolia hypoleuca*, *Æsculus turbinata* and *Acanthopanax ricinifolium*, with the beech, traverse all the larger islands, from the mountain forests of southern Kiushiu to those of Yezo and Saghalien, but attain their greatest development only in the middle and northern parts of the country.

As regards the climbers proper, *Schizophragma hydrangeoides* S. and Z. (*Tsuru-demari*), *Hydrangea petiolaris* S. and Z., and *Rhus Toxicodendron*, Var. *radicans* Miq. (*Tsuta-urushi*) surpass all others in strength and frequency. Up to a height of 25 metres their stems, thicker than the arm, and themselves covered with moss, creep along old oaks, beeches, maples, and other forest-trees, and also up rocky cliffs; and the white cymes of the two first-named climbers in summer contribute as much to the variety of colouring in the forest as the reddened leaves of the last-named in autumn. In open spots, especially too on coniferous trees, the evergreen *Evonymus radicans* Sb. (*Tsurumasaki*) is fond of climbing, to some extent replacing the less common ivy, and accompanying the three first-named plants through the whole group of islands, northward to the forests in southern Saghalien. "The still upright but decaying tree-trunks are (here) covered by *Hydrangea cordifolia* Maxim. (*H. petiolaris* S. and Z.) in the form of a dense network, and are converted into green columns of 9 metres high, which in July are adorned with numerous bunches of white flowers, and form one of the loveliest ornaments of the forest:" (Fr. Schmidt, "*Sachalin*," etc.).

Less aspiring than those already mentioned are *Mensipermum dahuricum* DC. (*Komori Kadzura*), *Celastrus articulata* (*Tsuru-mume-modoki*) and *Vitis inconstans* Miq. (*Tsuta*). If some of these now and then exhibit an inclination towards twining, this is still more distinctly the case with several kinds of deciduous *Magnoliaceæ* and *Ternstroemiaceæ*, viz., in the genera *Schizandra* and *Kadsura* of the first-mentioned family, and the genera *Actinidia* and *Stuartia* of the second. In the case of the two latter we have to do with half a dozen or more species, the *Tsuta-no-ki* (twiners) proper, whose thick stems of extremely porous wood, in which the eye cannot discover any trace of year-rings, as a rule rise independently to a height of several metres, then turn towards a neighbouring tree, twine round it several times from left to right and then mount with it to a considerable height, afterwards not unfrequently springing over to another neighbour, and here too fixing and supporting themselves by several strong coils, upon which they mingle their branches more or less freely with those of their supporters. It must however be pointed out that some kinds of *Actinidiæ* practise these habits only upon a small scale, and therefore like *Matatabi* (*Actinidia polygama* Planch.) associate themselves only with bushes or low trees. The climbing and twining *Magnoliaceæ* have the

same habits, only that their coils run from right to left. When a high trunk is wanting, they content themselves with a bush, or if this too is not to be found they are content to creep upon the ground. But it is in the shady forest that they attain their finest development. *Kadsura japonica* L., called also Kurogane Modoshi (iron creeper), is distinguished, not only by its vigorous cork-formation and its brownish-red autumn vesture, but likewise by the great elasticity and strength of its stems, which are as thick as the thumb, so that they are frequently used for the fastenings of bridges, and in other ways as a substitute for strong ropes.

The most highly developed twiners of the Japanese forest are *Wistaria chinensis* S. and Z. (Fuji) and the *Lardizabaleæ*, particularly *Akebia quinata* Decsne (Akebi Kadzura, A. tsuru) and *A. lobata* (Mitsu-ba-Akebi; *i.e.* Trefoil Akebie).

The *Wistaria* twines 20–30 metres high around the lofty trunks in the deep forest shade, and also through open bushes, and, if no support of any kind is attainable, even about itself; the *Akebias*, on the contrary, keep chiefly to the bushes and not far from the edges of the forest, where from the outside, particularly where the Hara adjoins the forest, the herbaceous *Pueraria Thunbergiana* Thbg. (Kudzu) winds through the bushes and gradually covers them entirely with its runners and clusters of violet flowers.

The occurrence of most of the Lianas previously mentioned is, however, by no means confined to the deciduous mountain forests, but extends as well to the winter-green forests of the south, of which laurel-leaved smooth-barked oaks, camphor-laurel, and its relatives, *Ternstroemiaceæ*, especially *camellias*, *Illicium anisatum* and *Ilicineæ* form the most important constituents. The evergreen forest consists frequently for great distances only of some kinds of oak (*Quercus cuspidata*, *Q. glabra*, *Q. acuta*, *Q. glauca*) with *Ternstroemia japonica*, *Eurya japonica*, and other evergreen shrubs as underwood.

We may here find room to mention a few more of the most noteworthy of the inhabitants of the summer-green mountain-woodlands. Up to a height of 1,300 or even 1,400 metres, we notice in the mountains of middle Japan (*e.g.* near Chiuzenji and on Mikuni-tôge), among the numerous forms of vegetation, a tree of only 6–8 metres high and of moderate circumference, whose smooth brownish bark strikes us by its bursting in places like the plane, and vividly recalls the ornamental tree found in gardens—the *Lagerstroemia indica*. It is a species of *Stuartia*, is called by the people, like the *Lagerstroemia*, *Sarusuberi* (from Saru, monkey, and suberu, to slide), and is prized for the toughness of its wood. The *Sanshio* (*Xanthoxylum piperitum*) also, a shrub which as a spice-producing plant is frequently cultivated about the houses, and whose stem and branches are marked by blunt thorns, is here at home, as well as the much more strongly armed *Acanthopanax spinosum* Miq. and the *Aralia horrida* Smith. Amongst the *Hydrangeas*, it is especi-

ally the *Hydrangea paniculata*, a good-sized shrub, which inhabits this region to a height of 1,700 metres; and amongst the Sumach species, besides the climbing poisonous Sumach, the *Rhus semialata* Murray, which is not distinguishable from *Rhus Osbeckii*, DC., and flowers here in September, though on the southern slopes of the Himalayas, at the same height, it flowers three to four months earlier.

Rhus sylvestris, the third forest-dweller of the Japanese Sumachs, does not as a rule rise so high, but is found most frequently in the foliaceous forests below 1,000 metres; *i.e.* to the extreme upward limit which is in favourable cases reached by *Castanea vulgaris* Lamk. Between 600 and 1,000 metres we find the edible chestnut sometimes along with the horse-chestnut (*Æsculus turbinata* Bl.), though its requirements are different. *Æsculus* loves the society of *Fagus*, *Calopanax ricinifolium* and *Magnolia hypoleuca*, the deep humus-soil of shady forests, upon which *Lomarias*, *Woodwardias*, and other beautiful ferns display their fronds, and *Asperula odorata* is no unfrequent guest; *Castanea*, on the other hand, prefers the sunny mountain slopes, on which it not unfrequently forms open groves. It is then generally the bearer of the mistletoe (*Viscum album* L.), which is spread through all Japan as far as Saghalien, and which I have observed also on pear-trees, whitethorn, and mountain-ash, on deciduous beeches and oaks (a rare thing in Europe), on walnut-trees and ashes, as well as on maples and willows.¹

The number of shrubs, and low trees which hardly rise to the same height as the chestnut, and are most frequently found in the woodland of 400–800 metres elevation, is very considerable. I name the following of the common ones:

Ternstroemia japonica, *Eurya japonica*, *Stachyurus præcox*, *Stuartia*, *Orixa japonica*, *Skimmia japonica*, *Ilex crenata*, *Berchemia racemosa*, *Sapindus Mukorosi*, *Staphylea Bumalda*, *Euscaphis staphyleoides*, *Albizia Julibrissin*, *Kerria japonica*, *Deutzia*, *Philadelphus*, *Hamamelis japonica*, *Helwingia japonica*, most of the *Caprifoliaceæ*, except the *Diervillæ*, which mount very much higher, the larger species of *Andromeda*, *e.g.* *A. japonica* and *A. ovalifolia*, *Symplocos* and *Styrax*, *Ligustrum*, *Daphne*, *Wickströmia*, *Rottlera japonica*, which, like *Clerodendron* and *Idesia*, chiefly inhabits the edges of the forest, but here frequently forms widely spreading bushes of 3–4 metres high, *Elæagnus*, *Lindera*, especially *L. sericea*.

The multiformity of the Japanese foliaceous forest is at various altitudes further increased by divers kinds of coniferous trees, especially Firs, Pines, *Retinisporæ*, and *Cryptomerias*, which however occur so sparsely as not to affect essentially its general character. While in the virgin forest the dead foliaceous trees soon rot and

¹ The berries of this mistletoe, as I saw them on numerous shrubs on Kunimittoge in October, 1874, are, when they first ripen, greenish-white, then pale yellow, and at last reddish-orange, so that perhaps, despite its external likeness to *Viscum album*, it is nevertheless another species.



Rein, Japan I.

Phototype by Strumper & Co., Hamburg.

CRYPTOMERIA-AVENUE AT IMAICHI NEAR NIKKO.

Hodder & Stoughton, Publishers, London.

are blown to the ground, and then become the home of mosses and fungi, chafers and snails, the dry pine-trees stand for a long time. Thus, then, we frequently see firs bearing not green needles, but grey tresses, which the eye observes in all directions, even on healthy trees. Here, in the heart of the mountains, there are still really virgin forests as yet untouched by man, and into which even the charcoal-burner has not penetrated.

As the foliaceous forest, so, too, the unmixed coniferous forest (Kuro-ki) is found at various heights, and from the sea-coast to the highest limit of tree-life; only, of course, its constituents do not remain the same, for we seldom find more than four kinds intermingled. The Aka-matsu or red pine (*Pinus densiflora* S. and Z.), and the Kuro-matsu or black pine (*P. Massoniana* Lamb.) are the commonest conifers in the country, and form, separately as well as in combination, the open coniferous forests of the lower region, of the old sand dunes, and the barren hills. The eye of the new-comer in one of the open harbours beholds forests of these pines, as does that of the passenger through the Inland Sea. It is easy to understand, therefore, how the erroneous view, that the acicular forest is predominant in Japan, has gained currency. Forests of these pines, generally of slight extent, are found exceptionally in the mountains even as high as 1,500 metres. Besides their two constituents, and the Alpine Dwarf-fir (*Pinus parviflora*), no other wild-growing fir is found, at least in the three large southern islands.

At a height of 500–1,000 metres, we find the home of the hand-somest Japanese conifers, with the most esteemed wood for building and other industrial purposes, forests of Sugi (*Cryptomeria japonica* Don.), Hi-no-ki (*Chamaecyparis obtusa* Endl.), Sawara (*Ch. pisifera* Endl.), and Hiba (*Thujopsis dolabrata* S. and Z.).

All these trees love sheltered valley-cuttings and hollows. The endemic occurrence of the *Cryptomeria* can only in exceptional cases reach 36° lat.; in a state of cultivation, on the other hand, it occurs much more frequently than any other forest tree, except the pines, and some splendid examples may be found in Yezo. It is the pride of the temple-grove, the greatest ornament of Japanese avenues, especially of that celebrated one on the way from Tôkiô to Nikkô. Both of the above mentioned cypresses are frequently found, and they rise much higher, in isolated instances as high as 1,600 metres, and even the third cypress in the union, the Hiba, is not rare in middle Japan. Shinano and Hida possess the most beautiful cypress forests, yet even here the axe has already greatly thinned them. The wood of these trees, especially of the fire-cypress (Hi-no-ki), on account of its white colour and other good qualities, is very much sought after for lacquer wares; it is also employed in the building of Shinto temples. On Koya-san in Kiu-shiu, after a beautiful mixed forest of Hi-no-ki and Sugi, there succeeds a grove of stately trees of *Sciadopitys verticillata* S. and

Z., which partly surrounds the famous temple-site. The tree is accordingly called the Podocarpus of Koya (Koya-maki), and is here, as elsewhere where it occurs sparsely, undoubtedly due to cultivation. It attains a height of 15 to 20 metres, and the trunk a circumference of 1 metre, so that its dimensions are much more imposing than Von Siebold represents them.

The Japanese yew or Araragi (*Taxus cuspidata* S. and Z.), so sought after for its finely veined red wood, is most commonly found in Hida. Like its relatives, the Inugaya (*Cephalotaxus drupeacea* S. and Z.) and the Kaya (*Torreya nucifera* S. and Z.), it is found more frequently as a shrub than as a tree, and scattered moreover through foliaceous woods and not in separate clumps.

A third pine-wood region of 1,500 to 2,400 metres elevation is occupied by firs and larches. The most imposing of the former, the Momi (*Abies firma* S. and Z.), remains usually below this height in the mixed forest or associated with Sugi and Hi-no-ki, but all the rest have here their true home. In the frequency of its occurrence, a near relative of the North American hemlock pine, the Tsuga (*Abies Tsuga* S. and Z.) surpasses all others, and like larch or Kara-matsu (*Larix leptolepis* Cord.), hardly ever fails to be found on any mountain over 1,500 metres high. Mingled with Tora-no-o-momi, *i.e.* the Tiger's-tail pine (*Abies polita* S. and Z.), it forms the Kuro-ki (black forest) above the Asa-ki (light green forest, deciduous) of Nantai-san from a height of 1,900 feet upwards until near the summit. On Fuji-san it begins, above the Hara, at a height of about 1,500 metres with *Larix leptolepis*, *Abies firma*, and *Abies Menziesii* Loud., and is in some places, at a height of about 2,000 metres, replaced by *A. bicolor* Maxim. and *A. Veitchii* Henk. In the Yunotaira on Asama-yama, at a height of 2,200 metres, this pine, which reminds us so much of *Abies canadensis*, is also mingled with *Larix leptolepis*.

Of special interest, moreover, is the composition of the upper pine-woods on On-take. As in the case of Fuji-san, it begins at the end of the Hara at a height of some 1,560 metres, where *Epilobium angustifolium* occurs on the sites of former fires, and rises to over 2,000 metres. It is a mixture of Tsuga (*Abies Tsuga*), Hinoki (*Chamaecyparis obtusa* Endl.), Kara-matsu (*Larix leptolepis*) and Tôhi (*Abies bicolor* Maxim.), with which are associated a few white birches, and the *Pyrus sambucifolia*, which reminds us of the mountain-ash. Instead of underwood, the ground is covered, as in so many other of the higher mountain woodlands of Japan, by the dwarf bamboo (*Arundinaria japonica* S. and Z.) to a height of 2 to 3 feet. Higher up disappear first *Chamaecyparis* and *Larix*, then Tsuga, and finally Tôhi. It follows from this, and from the observations of Maximowicz and Veitch on Fuji-no-yama, that *Abies bicolor* Maxim. (*A. Alcockiana* DC.) and *A. Veitchii* Henk. ascend the highest of all the firs.

The fourth coniferous region is that of the dwarf-fir, Gojo-no-

matsu, *i.e.* five-needle pine (*Pinus parviflora* S. and Z.) or the Yezo fir, of which we must speak at greater length in the following section when describing the vegetation of the Alpine region.

VEGETATION OF THE HIGH MOUNTAINS.

With this we must reckon all plants that are found above the forest limit of the higher Japanese summit, no matter whether they also occur in the forest itself, or not. This higher forest limit may be generally put at 2,000 metres, a height which is indeed often exceeded by a few hundred metres, but still more frequently is not reached.

As the mountain-plants with which we are here concerned have in part a very compliant nature, *i.e.* are by no means restricted to a sharply defined zone of height, but often appear very much lower than the situation which seems to present the most favourable conditions for their existence, we find on the summits of many Japanese mountains, which like Ibuki-yama or Komagatake in the Hakone mountains hardly reach a height of 1,400 metres, a vegetation of decidedly Alpine character, while other more considerable mountains at this altitude have the most beautiful mountain forest. The existence of the forest and the beginning of the high Alpine Flora depend here primarily not upon the temperature, but upon the winds, which often allow the latter to exist, where the growth of trees is impossible. Only in reference to the season of commencing bloom and maturity, as also with reference to the size of individuals in the same species, does the decreasing temperature due to increasing height become of primary importance. Thus, for example, in such species as often extend, like *Polygonum Weyrichii* and *Solidago virgaurea*, over a zone of from 1,200–2,000 metres, we find a retardation of the flowering time from early to late summer and autumn, and a tolerably steady shortening of the plant-axis with increasing altitude. This diminution of size with increasing height is, however, not observable in all species, but in fact many, such as, *e.g.* members of the genus *Anemone*, *Coptis*, *Primula*, show much regularity in their development.

In the Alps, plants which inhabit a broad zone of heights, partly, as in the case of *Linaria alpina* Mill. and *Epilobium Dodonæi* Vill., spread down the valleys from their lofty habitats through their roots and seeds being carried down by running water and thus finding opportunities to settle in lower elevations; in the mountain plants of Japan no such process could be observed, but on the contrary upward migration appears there to be the universal rule.

In Japanese plant-names the frequently occurring prefix "Yama, mountain," indicates not merely the habitat, but frequently also a distinction between plants growing wild, particularly in mountain-woodlands, and cultivated plants. Thus, *budo* is the cultivated

vine and grape, yama-budo the wild-growing *Vitis Labrusca*, urushi the lac-tree and yama-urushi the *Rhus sylvestris*, kaki the cultivated date-fig, and yama-kaki the *Diospyros kaki* L. in a wild state. Many indeed of the plant-names compounded with yama belong to true mountain-plants, yet the mountainous character of the habitat is much more appropriately expressed by prefixing the word "iwa, rock," e.g. Rindo = *Gentian*, Iwarindo = *Gentiana triflora* Pall., Kuruma, wheel, the wheel-flower, Iwaguruma = *Geum dryaoides* S. and Z., Kikiyo = the bell-flower, particularly *Platycodon*, Iwa-kikiyo = *Campanula lasiocarpa*.

From the following systematic enumeration of the plants of the higher mountains of Japan, it will be seen that the number of species is very considerable; yet it may be expected that a thorough examination of many lofty summits, particularly in the Shinano-Hida Snow Mountains, will make extensive additions to the list.¹ The greatest contributions have as yet been made by Haku-san and On-take; but even here my harvest would have been much more considerable, if I had been able to devote more time to it.

It must be added, moreover, that the following list only includes the species of whose occurrence above the forest region we have reliable information, while all species with uncertain habitats have been excluded.

Ranunculaceæ: *Anemone Nikoensis* Maxim., *A. altaica* Fisch., *A. flaccida* Fr. Schm., *A. debilis* Fisch., *A. Raddeana* Regel, *A. narcissiflora* L., *Adonis apennina* L. (*A. amurensis* Regel), *Trautvetteria palmata* Fisch., *Glaucidium palmatum* S. and Z., *Trollius japonicus* Miq., *T. Ledebourii* Rchb., *Coptis trifolia* Salsb.

Berberideæ: *Berberis japonica* R. Br., *B. Tschonoskiana* Regel, *B. vulgaris* L., *Aceranthus diphyllus* Morr. et Dec., *Diphylleia Grayi* Fr. Schm.

Papaveraceæ: *Corydalis Senanensis* Fr. and Sav., *C. Raddeana* Regel, *Dicentra pusilla* S. and Z.

Cruciferae: *Barbarea vulgaris* R. Br., *Arabis serrata* Fr. and Sav., *A. Halleri* L., *Cardamine Nipponica* Fr. and Sav., *Draba borealis* DC.

Violariæ: *Viola biflora* L., *V. pubescens* Ait.

Caryophylleæ: *Stellaria florida* Fisch.

Leguminosæ: *Trifolium Lupinaster* L., *Astragalus adsurgens* Pall., *Hedysarum esculentum* Led.

Rosaceæ: *Geum dryadoides* S. and Z., *G. montanum* L., *G. calthæfolium* Menz., *Poterium canadense* L., *Pyrus aucuparia* Gaertn.

Saxifrageæ: *Tanakea radicans* Fr. and Sav., *Saxifraga androsacea* L., *S. tellimoides* Maxim., *S. Isuræi* Fr. and Sav., *Parnassia palustris* L.

Crassulaceæ: *Sedum Aizon* L., *S. Rhodiola* DC., *S. subtile* Miq.

¹ This expectation has been already in part fulfilled through the important travels of Satow, Atkinson, Hawes and others.

Cornaceæ: *Cornus canadensis* L., *C. succica* L. (?).

Compositæ: *Solidago Virgaurea* L., *Artemisia pedunculosa* Miq., *A. Schmidtiana* Maxim., *Arnica angustifolia* Vahl, *Gnaphalium leontopodioides* Wild., *Saussurea scabiosa* Fr. and Sav., *Ainsliæa dissecta* Fr. and Sav.

Campanulaceæ: *Campanula lasiocarpa* Cham., *Platycodon grandiflorum* DC. does not rise much over 2,000 metres.

Ericaceæ: *Vaccinium Vitis idæa* L., *V. uliginosum* L., *V. ovalifolium* Sin., *V. longeracemosum* Fr. and Sav., *V. Idsurœi* Fr. and Sav., *Arctostaphylos alpina* Spreng., *Andromeda nana* Maxim., *Cassiope lycopodioides* Don., *C. Stelleriana* DC., *Phyllodoce taxifolia* Salisb., *P. Pallasiana* Don., *Menziesia ciliicalix* Maxim., *M. multiflora* Maxim., *Rhododendron Metternichii* S. and Z., *Rh. brachycarpum* Don., *Rh. macrocephalum* Maxim., *Rh. Tschonoskii* Maxim., *Rh. Kamtschaticum* Pall., *Rh. chrysanthum*?, *Azalea procumbens* L., *Ledum palustre* L., *Tripetaleia bracteata* Maxim.

Diapensiaceæ: *Diapensia lapponica* L., var. *β. asiatica* Herd., *Shortia uniflora* Maxim., *Schizocodon soldanelloides* S. and Z., *Sch. ilicifolius* Maxim.

Primulaceæ: *Primula cortusoides* L. *P. Kisoana* Miq., *P. Reinii* Fr. and Sav., *P. farinosa* L., *P. japonica* A. Gray., *P. cuneifolia* Ldb., *P. macrocarpa* Maxim., *Trientalis europæa* L.

Lentibulariæ: *Pinguicula vulgaris* L., *β. macrouros* Maxim.

Gentianeæ: *G. frigida* Haenk., *G. scabra* Bunge, *G. triflora* Pall., *Swertia perennis* L., *Halenia sibirica* Bork.

Scrophulariaceæ: *Pedicularis japonica* Miq., *P. Keiskei* Fr. and Sav., *P. rubens* Steph.

Polygonaceæ: *Polygonum Weyrichii* Fr. Schm. var. *β. alpinum* Maxim. (nom. jap. Iwatate, *i.e.* rock-knotweed), *P. Bistorta* L. var. *nana* Meisn., *P. Nepalense* Meisn.

Empetraceæ: *Empetrum nigrum* L.

Betulaceæ: *Betula alba* L., *Betula corylifolia* Reg., *Alnus viridis* DC.

Salicineæ: *Salix glabra* Scop.

Coniferæ: *Pinus parviflora* S. and Z.

Orchideæ: *Gymnadenia conopsea* R. Br., *G. rupestris* Miq., *Platanthera Reinii* Fr. and Sav.

Smilacæ: *Majanthemum bifolium* DC., *Trillidium japonicum* Fr. and Sav.

Liliaceæ: *Fritillaria camtschaticensis* Gawl.

Melanthaceæ: *Veratrum stamineum* Maxim., *V. nigrum* L., *V. album* L.

Cyperaceæ: *Carex nana* Boott., *C. Ontakensis* Fr. and Sav., *C. Hakonensis* Fr. and Sav., *C. stenantha* Fr. and Sav., *C. macrochaeta* C. A. Mey., *C. flavocuspis* Fr. and Sav., *C. tristis*.

Gramineæ: *Hierochloa borealis* R. and L., *Aira flexuosa* L. var. *montana* L., *Lophatherium annulatum* Fr. and Sav.

Filices: *Polypodium Phegopteris* L., *P. Dryopteris* L., *P. tricuspe*

Sw., *Osmunda regalis* L., *Woodsia ilvensis* R. Br., *W. polystichoides* Eat., *W. manchuriensis* Hook.

Of the shrub-like plants of the Japanese higher-mountain flora, birches, several larger kinds of bilberries, in particular *Vaccinium ovalifolium* Sin. and *Vaccinium hirtum* Thbg. (*V. Smallii* A. Gray) and *Rhododendron* do not extend much beyond the upper under-wood region, while *Alnus viridis*, *Salix glabra*, *Pyrus sambucifolia* continue until very near the loftiest summits, and in the case of On-take and Fuji-san are found even at a height of 3,000 metres. With them is associated the Japanese dwarf fir (*Pinus parviflora*) which often covers considerable tracts to a height of 1-1½ metres. In Saghalien F. Schmidt found this "dwarf-fir region" in places even at a height of 320 metres and under. Amongst and between the bushes of these plants have established themselves the following plants, which could hardly flourish without their modest shade and shelter against the wind: *Coptis trifolia*, *Trautvetteria palmata*, *Glaucidium palmatum*, *Diphylleia Grayi*, *Viola biflora*, *Parnassia palustris* and *Drosera rotundifolia* (these two only exceptionally above 2,000 metres), *Cornus canadensis*, *Solidago Virga aurea*, *Vaccinium uliginosum* and *V. Vitis idæa*, *Majanthemum bifolium*, *Oxalis acetosella* and *Trientalis europæa* (the two latter not above a height of 2,200 metres).

The dry sunny cliffs and their first products of disintegration are overgrown principally by pretty little *Ericineæ*, such as *Arctostaphylus alpina*, *Andromeda nana*, *Azalea procumbens*, the genera *Cassiope* and *Phyllodoce*, sometimes in company with *Empetrum nigrum*. Side by side with these, we find *Saxifraga androsacea* and *Diapensia lapponica*, the only plants amongst all here mentioned, which form thick beds. *Anemones*, *primulas*, *saxifrages*, and other familiar Alpine forms are generally less conspicuous. It will be seen also, from the enumeration, that glacial *ranunculuses* are wanting, while *Papilionaceæ*, *Saxifrageæ* and *Gentianeæ* are only poorly represented. Especially frequent is *Schizocodon soldanelloides*, the Japanese Alpine bell, which is found even at so low an elevation as 1,600 metres. Not only by the form of its flower but also by the manner of its occurrence, it reminds us vividly of *Soldanella alpina*, since it often encircles with its beautiful flower-bells the melting snow-drifts, and here develops in late summer, while 500 and even 1,000 metres lower it flowers early in the spring. But it is much larger and more beautiful than that Alpine dweller, and, as has been already intimated, extends over a much wider zone. The round heart-shaped leaves are everted on the margins, and are frequently reddened on the underside, like the always red flower stems. These bear, in a short one-sided cluster, from three to eight blossoms. The bell-like calyx is quinquefid, the large corona is bell-shaped, rose-coloured inclining to violet, with five dissected lobes and a small subsidiary corolla. There are besides six stamens with white anthers and a style.

From what has been said as to the flora of the high mountains of Japan, it follows that it is a peculiar mixture of Alpine and northern plant-forms, of species which partly are found widely spread in the sub-arctic regions of the Old and New World, and are very common in the shady woods of the northern temperate zone, and which, further southward, have ascended into the mountains, besides a slight number of species that have as yet been found only in Japan. It is a flora which undoubtedly originates from East Siberia and Kamtschatka, and which has been carried southward by the cold and violent monsoons and sea-currents, and up the mountains by valley-winds. This migration may be traced in latitude as well as in height, and is most plainly seen in those high volcanic summits which have not long lost their activity. There we see how the seeds of many of these plants are carried ever higher from their first low situation under the influences of valley-winds, until at length they reach the cooled summits. Foremost among these precursors and first beginners of the high-mountain flora, we find *Polygonum Weyrichii*, *Stellaria florida* and *Carex tristis*. In the case of various later immigrants, especially those which produce berries, other means may have contributed to the result, e.g. birds, in particular the ptarmigan, yet such a process of distribution is more easily conceivable than demonstrable.

If we sum up in conclusion what has been said as to the forms of vegetation in Japan, and in particular as to the vertical distribution of its conifers, we may distinguish five zones of vegetation:—

1. *Zone of Pine-woods and Juniper* to a height of 400 metres. It embraces the region of cultivation, the vegetation of the sand-dunes, of stagnant and slowly flowing water, of the bushy hill country, and of the evergreen forest in the south, which only in exceptional cases extends 200 metres higher.

2. *Zone of the Cryptomeria, Cypress and Yew.* 400–1,000 metres high. This is at the same time the range of the lower summer-green forest, in which the vegetation develops its greatest strength in point of luxuriance and variety of kinds, the region of Chestnuts, Deciduous Laurineæ, most of the Magnoliaceæ, Ternstroemiaceæ, Lardizabaleæ, Hydrangeas, Caprifoliaceæ and other abundantly represented tribes, as well as, finally, the district of the lower and most widely distributed Hara.

3. *Zone of Abies firma and the middle broad-leaved forest.* 1,000–1,500 metres high. To this belong the greater part of the deciduous forest, consisting of oaks, beeches, maples, alders, ashes, horse-chestnuts, aralias and the upper Hara.

4. *Zone of Firs and Larches.* 1,500–2,000 metres. It is also the district of the higher broad-leaved forest, composed of birches, alders, sub-Alpine plants and shrubs.

5. *Zone of Dwarf fir*, from 2,000 metres upward, the region of creeping Ericineæ and high-Alpine herbs.

C. COMPOSITION AND OTHER NOTEWORTHY FEATURES OF THE JAPANESE FLORA; ITS RELATIONSHIP TO OTHER REGIONS OF VEGETATION.

Of the two most recent and most extensive works on the Flora of Japan, Miquel's *Prolusio Floræ Japonicæ* indicates more than 2,100 species of vascular plants in 923 genera, while the *Enumeratio Plantarum* of Franchet and Savatier numbers 2,743 species in 1,035 genera. Accordingly within the last nine years, from 1867 when the *Prolusio* appeared, until the autumn of 1876 when the *Enumeratio* was completed, our knowledge of the higher plant-forms of Japan has been increased by 112 genera and about 650 species, among which many are entirely new. According to Franchet and Savatier, Japan possesses :

| | Families. | Genera. | Species. |
|--------------------------------|-----------|----------|----------|
| Dicotyledonous plants . . . | 121 . . | 795 . . | 1934 |
| Monocotyledonous plants . . | 28 . . | 202 . . | 613 |
| Higher cryptogamous plants . . | 5 . . | 38 . . | 196 |
| Vascular plants | 154 . . | 1035 . . | 2743 |

The considerable increase thus made of late to our knowledge of the Japanese flora is principally to be attributed to a more exact investigation of the mountainous interior. It consists, therefore, chiefly of representatives of the North European and Siberian vegetable region, or of their near relatives. We are still, however, without any exact scientific examination of many Japanese mountains, besides the island of Yezo, and particularly the smaller island groups. With the increasing intercourse with Japan, extending to the scientific world, better means of intercommunication and the growing number of well-trained collectors and observers, we may certainly expect that many existing botanical gaps will speedily be filled, and that by the ascertaining of new and trustworthy habitats the number of endemic plants will soon be considerably enlarged.

It is of great importance, moreover, that the botanists in Japan are going to work more critically than most of their predecessors, and are carefully distinguishing really and undoubtedly wild plants from those which have been artificially introduced. The circumstance that this has so little been done as yet, that in Siebold, Miquel, and even in Savatier, many ornamental and useful plants which have been imported figure as endemic, has in part quite misled our plant-geographers and been the cause of false conclusions as to the composition of the Japanese Flora. The work of Franchet and Savatier has been compiled with much industry

and care, but has not succeeded altogether in keeping clear of the fault in question, as has already been intimated.

In many cases it is of course extremely difficult for even the most conscientious observer and collector in Japan to determine how far, during the very ancient cultivation of the country, the hand of man has here distributed a plant over the country, or how far, on the other hand, the taste for beautiful flowers, or even less ideal needs, have there been the cause of the disappearance of one plant or another. At all events, the very common occurrence of small forests of *Cryptomeria* is for the most part (perhaps wholly) to be referred to cultivation, while *e.g.* the lotos-flower (*Nelumbium*) was possibly—though I doubt it—in earlier times a native of the standing waters of Japan, but disappeared when its rhizoma and nuts were sought as food, and its flowers for their beauty.¹

A critical Flora of the Islands of Japan has yet to be written. It will discredit many previous calculations! It is therefore much to be desired that Maximowicz, who alone can expect to meet with success in such an undertaking, may have time and energy for it, and that the support of all the botanists of Japan may not fail him in so desirable and laborious task.

“Since Thunberg, many sins have been committed with regard to the Japanese Flora through negligent investigation, hasty publication, careless establishing of new forms, and, finally, overlooking previously described species. If I wished to give a list of gross blunders, I should make too heavy a demand on the space of this journal (*Bot. Zeitung*). To criticise and clear away this continually accumulating rubbish is a difficult and tedious piece of work, which seriously disturbs the pleasure of the botanist's occupation, and indeed very improperly hinders his labours” (Maximowicz). As I entirely agree with this utterance of the most competent master of the Japanese and East Asiatic Flora generally, I also admit, of course, that the following observations, in so far as the materials are borrowed from the above mentioned *Floras* of Miquel, and Franchet and Savatier, can claim only a relative value and must be amended so soon as we possess a critical recension of the Japanese Flora.

From the following compilation of the number of species in different families, and in the more numerous genera, as they appear in Franchet and Savatier compared with the *Prolusio*, we may best form an idea of the great advance which our knowledge of the Flora of Japan has made in the last ten years.

¹ On this subject Maximowicz writes in the *Bot. Zeitung*, 1881, p. 274: “Rein denies the spontaneous occurrence of *Nelumbium* in Japan, and thus gives an illustration of the difficulty I have referred to, in the case of many species, of deciding whether they grow wild or have been imported. It is true that I too have only seen this plant in a state of cultivation, yet I should be inclined to consider it as indigenous to Japan, because it is undoubtedly found in Usuri and in the southern parts of Amurland.”

Japan possesses,

| | According to Miquel. Species. | According to Franchet and Savatier. Species. |
|--------------------------|-------------------------------------|--|
| Ericaceæ | 54 | 76 |
| Cyperaceæ | 101 | 168 |
| Coniferæ | 69 | 41 |
| Filices. | 118 | 165 |
| Carex | 55 | 97 |
| Polygonum | 26 | 44 |
| Asplenium | 27 | 43 |
| Aspidium | 21 | 39 |
| Cnicus | ? | 26 |
| Vincetoxicum | 8 | 26 |
| Cyperus | 15 | 24 |
| Acer | 16 | 24 |
| Rubus. | 15 | 22 |
| Senecio | 7 | 22 |
| Quercus | 25 | 20 |
| Aster | 4 | 20 |
| Rhododendron. | 12 | 20 |
| Scirpus | 4 | 19 |
| Artemisia | 21 | 17 |
| Salix | 20 | 17 |
| Lilium | 17 | 17 |
| Clematis | 12 | 16 |
| Potentilla | 10 | 16 |
| Polypodium. | 11 | 16 |
| Ranunculus. | 11 | 15 |
| Lonicera | 10 | 15 |
| Ilex | 13 | 14 |
| Chrysosplenium | 3 | 14 |
| Veronica | 13 | 14 |
| Corydalis | 9 | 13 |
| Prunus | 13 | 13 |
| Arabis | 9 | 12 |
| Hypericum | 9 | 12 |
| Viola | 8 | 12 |
| Spiræa | 9 | 12 |
| Viburnum | 12 | 12 |
| Galium | 7 | 12 |
| Saussurea | 5 | 12 |
| Vaccinium | 11 | 12 |
| Euphorbia | ? | 12 |
| Allium | ? | 12 |
| Geranium | 3 | 11 |
| Anemone | 10 | 10 |
| Stellaria | 6 | 10 |

| | According to Miquel. Species. | According to Franchet and Savatier. Species. |
|-------------------------------------|-------------------------------------|--|
| <i>Rosa</i> | 10 | 10 |
| <i>Lysimachia</i> | 12 | 10 |
| <i>Bambusa</i> | 11 | 10 |
| <i>Sedum</i> | 9 | 10 |
| <i>Arisæma</i> (<i>Arum</i>). . . | 9 | 9 |
| <i>Hydrangea</i> | 16 | 7 |

From this it will be perceived, too, how unfounded and how fallible are previous calculations of the percentage of particular leading families or larger groups, *e.g.* of woody plants, in the composition of the Japanese Flora, as compared with other regions of vegetation. We must also take into account, as already mentioned, that in these calculations many imported plants are reckoned as endemic, thus increasing the uncertainty of the basis on which the calculations rest. Of more familiar plants I will name only: *Nelumbo nucifera*, species of *Melia*, *Rhus vernicifera*, and *R. succedanea*, *Pawlonia imperialis*, *Ricinus communis*, *Elæococca cordata*, *Cycas revoluta*, *Chamærops excelsa*, which, as well as many others, are regarded by most botanists as good Japanese species, but nevertheless are not so. On the other hand, I can adduce the best evidence that *Wistaria chinensis*, *Castanea vulgaris*, *Nandina domestica*, and *Gardenia florida*, are good Japanese species, although this has hitherto been doubted by most writers.

The conifers also deserve a particular mention. Franchet and Savatier have indeed reduced Miquel's large total of 69 species to 41, but even of these many will not stand strict criticism. I strike out especially *Salisburia adiantifolia* Sm., with the concurrence of my friend Ito Keiske, because we find it only cultivated in temple-grounds, and I include further as very doubtful: *Pinus koraiensis*, *Larix Kämpferi*, *Sciadopitys verticillata*, *Thuja gigantea*, *Biota orientalis*, *Chamæcyparis squarrosa* and *Ch. pendula*, *Taxus tardiva*, and all species of *Podocarpus*, because in all my journeyings I have never found them in any but a cultivated state. The genera *Salisburia* and *Podocarpus* belong indeed to a very old East Asiatic stock—fossil species of them are found in the middle Jura of Amurland, and of the Japanese province Kaga,—but appear to have retreated much further southward towards the end of the tertiary period. The Ginkgo of Japan comes originally, even in the opinion of native botanists, from China, though it has not yet been shown if and where it grows wild there. The species of *Podocarpus*, however, which are found in Japan, partly used for hedges, partly as trees in gardens and temple-groves, are only endemic in the Riukiu islands.

Japan derived its cultivated plants, except a few such as tobacco and potatoes, from China, just like its industry, its writing, and the prevailing religion. Thus it was that hemp, cotton and silk formed

the chief clothing materials for the Japanese also, rice the principal nourishment, and tea the predominant drink.

In view of the common civilization of China, Corea and Japan from very ancient times, it is moreover very probable that a number of the ornamental and useful plants peculiar to this region no longer occur in a wild state; nor is it necessary to recall our own domesticated plants. The Anglo-Saxon in California seems to furnish a proof, as Sir Joseph Hooker observes, that the same generation which has discovered and admired a vegetable memorial of ancient times (the *Sequoia gigantea*) can also with torch and saw in hand bring about its destruction.

In a pretty large number of Japanese plants, the prefixes Shina, Kara or Tô (China), Chôzen (Corea), Tenjiku (India), Jagatara (Batavia), Oranda (Holland), Nanban (foreign barbarians, Portuguese) indicate their foreign origin, *e.g.* Shina-no-ô (*Corchorus capsularis*), Kara-mume (*Chimonanthus fragrans*), Kara-aoi (*Alcea rosea*), Tô-garashi (*Capsicum longum*), Kara-matsu-momi (*Larix Kämpferi*), Tô-giri (*Clerodendron squamatum*), Tô-jin-mame, Tô-goma (*Ricinus communis*), Tô-gibosi (*Funkia subcordata*), Tô-kibi (*Zea Mais*), Chôzen-giku (*Boltonia indica*), Chôzen-asagao (*Datura alba*), Tenjiku-manori (*Capsicum annuum*), Jagatara-ino (*Solanum tuberosum*), Oranda- (Orlanda-) genge (*Trifolium repens*), Oranda-mitsuba (*Apium graveolens*), Oranda-giseru (*Æginetia indica*), Nanban-hakobe (*Cucubalus bacciferus*), Nanban-kibi (*Zea Mais*).

Freed of all the above-mentioned and many other foreign elements, but enriched by many new discoveries, the catalogue of the endemic vascular plants of Japan will probably in a few years exhibit nearly 3,000 items. So that, in spite of many deductions to be made, this region of vegetation, which has so often been discussed and praised, seems to us richer and more manifold than ever; and while it cannot be expected that the number of tropical types will receive any important accession, the list of the species which connect Japan with the north temperate portion of the ancient continent and with North America, is ever becoming more extensive.

Even more than by its wealth of species, the Flora of Japan surprises and interests us by the great number and difference of its genera, and thus, as well as by its high percentage of woody plants, more strongly than any other country of the temperate zone reminds us of the tropics. Though quite a number of them, as is shown by the foregoing list,—are rich in species, yet the enormous number of monotype genera, as well as of those with, at most, two or three species, is very astonishing, so that here also Japan stands alone amongst extra-tropical countries. Our interest in its Flora is heightened still more, when we examine the geographical distribution of its members, and find that, in this respect, it is a striking mixture of many species peculiar to the country, with such as are distributed over China and the Himalayas,

tropical India and the Malayan Archipelago, North Europe and Siberia, and finally over North America, and that principally over the Canadian plains and the Appalachians.

The Flora of the Mediterranean region is only slightly represented in Japan; above all, there are wanting the numerous aromatic herbs and shrubs of the Labiatae and Cistineae, the Compositae and other families, which fact must in all probability be ascribed to the great differences in the quantity and distribution of heat and rainfall. It is a mistake, on the other hand, to say that the flowers of Japan, despite all the beauty of many of them, have no smell; for various lilies and rhododendrons, several orchids, the lily of the valley, where it is found, *Pittosporum Tobira*, *Rosa rugosa*, and others, vie in delightfulness of scent with the flowers most conspicuous in this respect of other countries. As, however, the Flora of Japan exhibits few aromatic plants, so, too, it has few with a tomentum on their green organs, though on the other hand, many are inclined to parti-coloured foliage in a high degree.

Those plants which Japan has in common with tropical India and the Malayan Archipelago, mostly attain their northern limit in its south and middle portions. They include the following tropical and subtropical families:

Bixineae, Pittosporae, Ternstroemiaceae, Sterculiaceae, Simarubae, Meliaceae, Olacineae, Sabiaceae, Melastomaceae, Begoniaceae, Ficoideae, Cucurbitaceae, Myrsineae, Ebenaceae, Styraceae, Loganiaceae, Acanthaceae, Myoporineae, Phytolaccaceae, Basellaceae, Amaranthaceae, Proteaceae, Laurineae, Artocarpeae, Piperaceae, Chloranthaceae, Palmeae, Scitamineae, Hypoxideae, Hæmodoraceae, Dioscoreae, Smilaceae, Asparagineae, Stemonaceae, Commelineae, Pontederiaceae, Salviniaceae, and a very large number of genera from other families. They have followed the Kuro-shiwo, crossed the Riukiu Islands, and in part form in the two large southern islands the most important constituents of the evergreen forest, which is continued along the coast-region of the main island to about the 36th parallel, the northernmost part of Yedo Bay, while in the higher interior it ceases much further south. It is true that this forest here no longer reaches a height of 600 metres, and accordingly is quite absent in the provinces of Shinano and Hida. The laurel-form predominates in it, and its main constituents are undoubtedly the evergreen oaks (*Quercus cuspidata*, *Qu. glabra*, *Qu. thalassiana*, *Qu. phylliræoides*, *Qu. acuta*, *Qu. sessilifolia*, *Qu. glauca*, *Qu. gilva*). With these are associated of the evergreen Laurineae, even species of the genera *Cinnamomum*, *Machilus*, *Tetranthera*, *Ætinodaphne*, *Litsæa*, and *Daphnidium*, amongst which *Cinnamomum Camphora* Nees is the most important. The last named forms an interesting constituent of the forests on Kagoshima Bay, where *Buxus sempervirens* partly forms the underwood, and of the hilly woodlands of Tosa. Other winter-green trees in South Japan are *Illicium anisatum* and *Magnolia*

salicifolia, *Nandina domestica*, *Pittosporum Tobira*, *Ternstroemia japonica*, *Cleyera japonica*, *Eurya japonica*, and *Camellia japonica*. The *Camellia* forms, in southern Japan, a good-sized tree, whose stem sometimes attains a circumference of 1.5 metres, and a height of 10 metres, and occurs up to an elevation of 1,000 metres in the mountain woodlands of Kiushiu and Shikoku; so that it here touches the lower limit of the beech, and with it and *Asperula odorata* was found by me in the Sasagami-tôge at a height of 970 metres, where it was still tree-like with a height of 5-6 metres. Further northwards its height diminishes more and more, and assumes a shrub-like form. The mouth of the Tone-gawa, near Chôshi-guchi, at the 36th parallel is probably the north limit of its occurrence in a wild state on this side of the Pacific; while it is remarkable that towards the Sea of Japan, the plant goes more than two degrees further, and in the hilly woodlands of northern Echigo forms an underwood of about a metre high. Under cultivation it grows and attains a good size as far as Yezo in the open air, while the tea-shrub extends to the 40th degree of latitude.

Trochodendron aralioides, as well as the evergreen *Skimmia japonica* Thbg. continues as far as Yezo, also *Ilex crenata*, while the other winter-blooming *Ilicineæ* in part end together with the *Camellias*.

Celastrus Kiusiana Fr. and S. I found as a constituent of the evergreen forest in southern Kiushiu by the side of *Bux.* Of the *Rosaceæ* belong to the Japanese evergreens: *Photinia villosa* and *P. japonica*, *Raphiolepis japonica* and *Rosa Luciae*, of *Corneæ*: *Aucuba japonica*, of *Rubiaceæ*: *Gardenia florida*, of *Oleaceæ*: *Olea fragrans* Thbg., *O. aquifolium* S. and Z.

While many of the previously mentioned plants by no means belong to the tropical vegetation, but like the *Ternstroemiaceæ* have been enumerated here for the sake of completeness, this is still more the case with the evergreen *Thymeleæ* (*Daphne*) and broad-leaved *Ericineæ*, such as *Epigæa asiatica* (*Parapyrola*), *Rhododendron Metternichii* and others. On the other hand, we must include here as thoroughly tropical forms several parasites, which have spread from their home in the Malayan Archipelago into southern Japan. These are: *Viscum articulatum* Burm. (*V. Opuntia* Thbg.), *Loranthus Yadoriki* S. and Z., *Luisia teres* Bl. (*Epidendrum teres* Thbg.), *Malaxis japonica* Fr. and Sav.

The interesting leafless mistletoe (*Viscum articulatum* Burm.), with its flat geniculated and fork-like branches, reminds us by its habitus of many cactuses. Its home extends over the mountain woodland of Further and Hither India, of the Malayan islands, and the warmer Australia, southern China and Japan. Its hosts are partly periodical, partly evergreen trees and shrubs, of very various families. In southern Japan it has hitherto been found only on *Symplocos*, *Litsæa* and *Eurya*; I can add that it occurs, in Satsuma, also on the boughs of the *Camellia japonica*.

Loranthus Yadoriki S. and Z. has as yet been found only on the island of Kiushiu, where it dwells on *Ilex* and *Quercus* (*Qu. acuta*), but probably extends also further southward. Of the two Epiphytic Orchideæ, *Luisia teres* is pretty common in Kiushiu. In Satsuma and Ōsumi, according to my observation, it dwells on the tallow-tree (*Rhus succedanea*). As it is at home in Java and in southern China, it is probably also not wanting in the Riukiu islands. It is striking that *Malaxis japonica*, according to Savatier, dwells on *Cephalotaxus drupacea*, and occurs together with it in the mountain woodlands of middle Japan, a deviation from the habits of the epiphytic Orchideæ, which is assuredly without parallel.

Like the deciduous oaks and magnolias, the genera of Lauraceæ, Ternstroemiaceæ, Araliaceæ, Styraceæ, Rutaceæ, Melastomaceæ, and other tropical families, or families which penetrate into the tropics and which periodically renew their leaves, continue much further to the north than those which are continually green. Thus we find species of *Lindera*, *Actinidia*, *Acanthopanax*, *Symplocos*, *Styrax*, *Evodia*, *Osbeckia* as far as Yezo and southern Saghalien.

Much more striking still is the extensive northern distribution of a whole series of Cucurbitaceæ. While Germany harbours only the familiar bryony (*Bryonia alba*), and North America knows only three native species of as many genera (*Bryonia*, *Melothia* and *Sicyos*), Japan has 9-10 species in 8 genera (*Trichosanthes*, *Lagenaria*, *Luffa*, *Momordica*, *Melothria*, *Actinostemma*, *Gynostemma*, *Schizopepon*). Thus I found, even in Nambu, *Trichosanthes cucumeroides* Ser. and *T. japonica*, while Maximowicz observed near Hakodate *Gynostemma cissoides* Benth., *Actinostemma lobatum* Maxim., and *Schizopepon bryonæfolium* Maxim., just as they are found also in Amurland.

The connection of the Japanese with the tropical Indian Flora is shown above all by the graceful bamboo-cane, that exceedingly important element in the vegetable picture of Japanese towns and villages and in the domestic life of their inhabitants. The largest and most important varieties of it never blossom here, and by this very circumstance announce that this is not their proper home. For the same reason, too, the determination of them is difficult and uncertain, and it appears still very doubtful whether these large species with the generic name *Take* (*Bambusa variegata* Sieb., *B. puberulata* Miq. and several others) are well established, or whether they are not rather to be considered as varieties of Indian species, especially of *B. tulda* Roxb. Groves of them are found, called *yabu* (an ordinary grove is called *mori*) not far above the seaboard as far as to 38° N. In southern Kiushiu they ascend the mountains as high as 900 metres, and in middle Japan between 34° and 36° N. (Hakone Mts. Usui-tôge, Mikuni-tôge, Kaga) they are found in places as far as up as 500 or 600 metres. They nowhere attain greater dimensions than in the neighbourhood of Tôkio, where

specimens of 45-50 cm. in circumference and 17-20 metres high are not rare.

Dwarf bamboos and related kinds of grasses, with the collective name *Sasa*, partly grown for ornaments in gardens, as hedges, etc., and partly growing wild, blossom every year. Among the wild *Arundinariæ*, several species form the usual undergrowth of the light, higher mountain forests, and produce, not indeed a tall, yet often so dense a thicket that it is difficult to penetrate it.

According to the *Enumeratio plantarum* of Franchet and Savatier, I reckon amongst the wild-growing plants of Japan the following peculiar and for the most part monotype genera :

2 *Ranunculaceæ*: *Glaucidium* S. and Z. and *Amenopsis* S. and Z.

1 *Berberideæ*: *Aceranthus* Decaisne.

2 *Magnoliaceæ*: *Trochodendron* S. and Z. and *Cercidiphyllum* S. and Z.

1 *Papaveraceæ*: *Pteridophyllum* S. and Z.

2 *Rosaceæ*: *Stephanandra* S. and Z. and *Rhodotypus* S. and Z.

6 *Saxifrageæ*: **Rodgersia* A. Gray, **Tanakea* Fr. and Sav., *Schizophragma* S. and Z., *Platycrater* S. and Z., *Cardiandra* S. and Z., **Deinante* Maxim.

1 *Hamamelideæ*: **Disanthus* Maxim.

2 *Umbellifereæ*: **Nothosmyrnium* Miq. and **Chamæle* Miq.

1 *Rubiaceæ*: **Pseudopyxis* Miq.

3 *Compositæ*: *Mallotopus* Fr. and Sav., **Macroclidium* Maxim., **Pertya* Schultz Bip.

1 *Ericaceæ*: **Tsusiophyllum* Maxim.

1 *Diapensiaceæ*: *Schizocodon* S. and Z.

1 *Cyrtandraceæ*: *Conandron* S. and Z.

1 *Hydrophyllaceæ*: **Ellisiophyllum* Maxim.

1 *Boragineæ*: **Ancistrocarya* Maxim.

3 *Labiataæ*: *Keiskeia*, Miq., **Perilula* Maxim., *Chelonopsis* Miq.

1 *Juglandea*: *Platycarya* S. and Z.

1 *Urticaceæ*: **Sceptrocnide* Maxim.

1 *Conifera*: *Thujopsis dolabrata* S. and Z.

1 *Orchideæ*: **Yoania* Maxim.

3 *Melanthaceæ*: **Chionographis* Maxim., **Helionopsis* A. Gray, **Metanarthecium* Maxim.

These are 36 exclusive Japanese genera, as compared with 34 which Grisebach enumerates after Miquel, although I have struck out *Chimonanthus* Lindl., *Paulownia* S. and Z. and *Sciadopitys* S. and Z. as not growing wild, *Skimmia* Thbg., *Tripetaleia* S. and Z., *Pentacalia* S. and Z. as also represented elsewhere (Himalaya or North America), and *Diaspananthus*, *Orthodon*, *Rhodea*, *Helionopsis* and *Sugerkia* as belonging to other genera. The number of newly established genera (indicated in the above compilation by a *) is thus a very considerable one. This may indeed seem a fresh proof of the great abundance of forms, but to base far-

reaching conclusions upon it would certainly be very hazardous. It is extremely probable that a future minute examination of Corea and China will show that the great majority of these endemic genera of Japan exist also on the continent. It will then be shown that between these three countries there exists a much more intimate connection with regard to their vegetation, than could previously have been assumed. As however the Alps appear to form the southern limit of the forest region of northern Europe towards the Mediterranean region, so the Himalaya and its south-eastern ramifications appear to be the south-western margin of this great Chino-Japanese vegetable region, in which, favoured by abundant rainfalls and a temperature corresponding to the Japanese, many genera and species of the eastern monsoon district reappear, which are probably wanting in the interior of China, with its continental climate. Thus the following have as yet been found only in Japan and the Himalaya: *Michelia Champaca* L., *Stachyurus* S. and Z., *Bœninghausenia albiflora* Reich, *Skimmia*, *Helwingia* and some others. Much more important and numerous however are the genera and species which Japan shares with China and in all probability also with Corea. The most remarkable of these genera are: *Akebia*, *Stauntonia*, *Nandina*, *Hovenia*, *Kœlreuteria*, *Pueraria*, *Kerria*, *Raphiolepis*, *Deutzia*, *Phellopterus*, *Aucuba*, *Rehmannia*, *Pentacalia*, *Paulownia*, *Sciadopitys*, *Cryptomeria*, *Cephalotaxus*, *Salisburya*. To these will be further added, if we take into account their distribution over the largest part of the whole eastern monsoon district: *Kadsura*, *Euptelea*, *Dontostemon*, *Eutrema*, *Actinidia*, *Phellodendron*, *Distylium*, *Corylopsis*, *Hamamelis*, *Damnacanthus*, *Serissa*, *Ainsliæa*, *Platycodon*, *Codonopsis*, *Glossocomia*, *Enkianthus*, *Anodendron*, *Metaplexis*, *Crawfurdia*, *Lysionotus*, *Bothriospermum*, *Pterospermum*, *Corylopsis*, *Premna*, and *Mosla*.

The number of Japanese species of other genera, which have been found also in China and Manchouria, as well as of those which Japan shares with the entire northern forest-region of the old, and partly also of the new continent, is very considerable. Of these species we here supply only the names of the most widely distributed:

Anemone triloba, *Ranunculus repens*, *R. sceleratus*, *Caltha palustris*, *Coptis trifolia* (not in middle Europe), *Actæa spicata*, *Draba nemorosa*, *Drosera rotundifolia*, *Parnassia palustris*, *Halianthus peploides*, *Stellaria uliginosa*, *Cerastium vulgatum*, *Oxalis corniculata*, *O. Acetosella*, *Lathyrus palustris*, *Spiræa aruncus*, *Potentilla palustris*, *P. Anserina*, *Rubus Chamæmorus*, *Chrysosplenium oppositifolium*, *Cornus suecica*, *Linnæa borealis*, *Viburnum Opulus*, *Sambucus racemosa*, *Galium triflorum*, *G. Aparine*, *Valeriana dioica*, *Solidago Virgaurea*, *Taraxacum Dens-leonis*, *Vaccinium Oxycoccus*, *V. Vitis Idæa*, *Empetrum nigrum*, *Ledum palustre*, *Pyrola rotundifolia*, *P. minor*, *P. uniflora*, *Diapensia*

Lapponica, *Trientalis europæa*, *Naumburgia thyrsiflora*, *Veronica Anagallis*, *Brunella vulgaris*, *Stachys palustris*, *Mertensia maritima*, *Solanum nigrum*, *Calystegia Soldanella*, *Menyanthes trifoliata*, *Chenopodium maritimum*, *Polygonum aviculare*, *Callitriche verna*, *Humulus lupulus*, *Alnus viridis*, *Potamogeton natans*, *Convallaria majalis*, *Luzula campestris*, *Scirpus lacustris*, *Eriophorum gracile*, *Carex stellulata*, *C. vesicaria*, *C. muricata*, *Beckmannia erucæformis*, *Phalaris arundinacea*, *Poa pratensis*, *P. nemoralis*, *P. serotina*, *Glyceria fluitans*, *Festuca rubra*, *Triticum caninum*, *Asplenium filix-femina*, *Polypodium vulgare*, *Lastrea dilatata*, *Ophioglossum vulgatum*, *Osmunda regalis* and *Lycopodium Selago*.

Besides these well known species, and a quantity of others which might be added to them, and whose sphere of distribution likewise extends nearly as far as that of the periodically blooming forests of the northern hemisphere, the North American forest-region eastward of the Mississippi stands also in a peculiarly intimate botanical relationship to Japan and the eastern monsoon-region. This is shown not only in their common possession of many genera of a vast number of species, which are entirely wanting in the neighbouring regions and also in Europe, but also in the similarity of the physiognomy of the whole picture presented by the vegetation, which is in great and surprising contrast to the forests of the Pacific side of North America.¹ The great variety and the gay mixture of different species of trees and shrubs, such as characterise the broad-leaved forests of Japan, are found also, as has already been intimated, in the forests of the eastern United States and the Canadian plain adjoining them. Moreover these American forests exhibit, in addition to the prevailing deciduous trees and their variegated autumn vesture, numerous evergreen plants, and in them also lianas play a much more considerable part than in Europe.

This community of many genera and species struck even Thunberg, but Zuccarini was the first to follow the subject further, and by detailed comparisons to exhibit this close relationship of the eastern mountain and forest region of the United States to the Japanese and Chinese region. The same subject later also engaged the attention of A. Gray, Miquel, Grisebach, and Sir Joseph Hooker, and, particularly in the case of the first-named botanist, led to a thorough investigation of the many problems suggested thereby. According to his comparisons, the Atlantic forest-region of North America has no fewer than 65 genera in common with Japan and the adjoining monsoon-district, which are wanting elsewhere, either altogether, or at all events in Europe and the western portion of North America. This is the list of them :

¹ A. Gray distinguishes an Atlantic and a Pacific forest-region, in the former a very varied mixture of broad foliage greatly predominating, in the latter acicular trees.

Illicium, *Magnolia*, *Menispermum*, *Caulophyllum*, *Diphylleia*, *Brasenia*, *Stuartia*, *Zanthoxylum*, *Cissus*, *Ampelopsis*, *Berchemia*, *Sapindus*, *Wistaria*, *Desmodium*, *Lespedeza*, *Rhynchosia*, *Astilbe*, *Hydrangea*, *Itea*, *Penthorum*, *Hamamelis*, *Liquidambar*, *Cryptotania*, *Archemora*, *Fatsia*, *Diervilla*, *Mitchella*, *Oldenlandia*, *Leucothoë*, *Pieris*, *Clethra*, *Symplocos*, *Ardisia*, *Catalpa*, *Tecoma*, *Leptandra*, *Callicarpa*, *Cedronella*, *Amsonia*, *Phytolacca*, *Benzoin*, *Saururus*, *Pachysandra*, *Laportea*, *Pilea*, *Bœhmeria*, *Microptelea*, *Maclura*, *Juglans*, *Arisæma*, *Pogonia*, *Arethusa*, *Dioscorea*, *Aletris*, *Coprosmanthus*, *Chamælririum*, *Arundinaria*, and *Onoclea*; from which I have omitted only *Nelumbium*, which in Japan is undoubtedly a cultivated plant, introduced from India by way of China. But not merely in the exclusive occurrence of the numerous genera here mentioned in the Atlantic forest-region of North America and that of Japan and in the physiognomy of their forests, do we observe the great similarity of the two, but also in the correspondence of nearly 250 species. A considerable number of other genera, which belong to the eastern monsoon-district, inhabit also the Pacific forest-region of North America, and extend their home from there to the Atlantic Ocean, but are entirely wanting in Europe. I name here only the better known :

Dicentra, *Æsculus*, *Negundo*, *Sophora*, *Philadelphus*, *Aralia*, *Gaultheria*, *Menziesia*, *Chamæcyparis*, *Torreya*, *Trillium*, and *Adiantum*.

A. Gray has recently instituted a very interesting comparison between the numbers of genera and species respectively represented in the forest-trees of four regions of the northern hemisphere, which I may quote here :

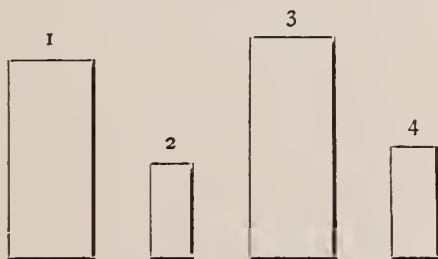
Atlantic Forest-region of North America, 66 genera, 155 species.

Pacific Forest-region of North America. 31 genera, 78 species.

Japan and Manchouria Forest-region, 66 genera, 168 species.

Forests of Europe, 33 genera, 85 species.

These startling figures may be more easily realized if they are represented by diagrams, as is done by Gray, consisting of rectangular figures answering to the four regions, their length corresponding with the number of species, and their width with the number of genera, as follows :



1. Atlant. N.-America. 2. Pacific N.-America. 3. Japan-Manchouria.
4. Europe.

Our treatment of the most conspicuous features and relations of the Flora of Japan would remain incomplete if we did not in conclusion attempt to explain the significance of these facts, as well as mention briefly the attempts of others to explain them.

The luxuriance of the Japanese Flora, as is seen for instance in the mountain woodland and bamboo groves, is due to the co-operation of a fertile soil, of high temperature, and of abundant rainfalls distributed over the whole year, but in particular occurring in considerable quantity in the warm summer; but its wealth and variety have in addition quite other causes to explain them. If we would ascertain these and attain a true understanding of the combination of so large a number of tropical Indian, Chinese, Manchourian, European and Siberian genera and species with so great a number of endemic forms, we must not merely take into account the present geographical and climatic conditions, but above all we must consider the early palæontological history of this vegetation. For if it is true, as Areschoug¹ says, in reference to the earlier Scandinavian vegetation, that the vegetation of a country is not determined exclusively by the now prevailing cosmical conditions, this is particularly the case in Japan. To the still persistent conditions and a post-tertiary immigration I attribute the tropical elements of its Flora together with the Arctic-Alpine elements, and also those appertaining to the northern forest-region of the old continent, while I do not, like Gray and Hooker, regard merely the North American members of the Japanese Flora, but also those which are distributed over China and Manchouria, as well as all the endemic members, as a very old original stock dating from the tertiary period.

As a consequence of the connection of the great Japanese islands by means of the Kuriles with Kamtschatka, by Saghalien with Amurland, by Okí, Iki, and Tsushima with Corea, and by the Riukiu Islands with Formosa and the Malayan archipelago, the way was paved for the immigration of Asiatic plants from north, west and south. The intervals between the several islands are to some extent bridged over by sea currents and winds, which easily carry germs from island to island. But the transportation of these would not of itself have produced any settlement, unless the climate and the soil had favourably co-operated. The evergreen trees and shrubs, which, like many other tropical plant-forms, gradually advanced northward along the course indicated, accustomed themselves by degrees—we may assume—to some extent, on their wanderings away from their own proper home, to the colder wintry nights, and found the essential conditions of their existence satisfied in the comparatively great heat during the day, but above all in the warm moist atmosphere during the summer.

¹ "Bidrag till den Skandinaviska Vegetationens Historia," af F. W. C. Areschoug.

The immigrants however from the north and north-east, natives of the northern world, accustomed to long and severe winters, ascended the mountains to the altitude which, in a climatic point of view, was best adapted to their habits. Their introduction also must be placed in the post-tertiary period, when the volcanic summits were for the most part formed, and the country had, if not entirely, at all events approximately attained its present elevation and relief, as well as the still prevailing climatic conditions. All the facts are in favour of this view, while the assumption that these boreal constituents of the Flora of Japan were already present in the ice-age, but were driven further south and later returned again northwards and up the mountains, finds no support in the constitution of the country or in the actual mode of propagation of northern plants. The seeds of these plants of higher latitudes wander with the raw and violent northern monsoon currents in air and sea gradually southward, reach the slopes of the mountains and are carried up towards the summits by valley winds, as has already been pointed out. That other means of propagation may co-operate according to the nature of the fruits and seeds, such as the ptarmigan, birds of passage and others, I have no doubt, but I attribute to them only a subordinate part, as compared with the winds.

Only when the floras of all the numerous islands of Formosa to Cape Lopatka, as well as those of Corea and of Manchouria have been closely investigated, shall we have a true idea of the suggested migrations of Japanese plants with foreign centres of propagation. For many of them, which have long been regarded as endemic, we shall discover a much wider sphere of distribution, and only then gain the true interpretation to be put upon the remainder.

For the welfare of many perennial plants, which point to an origin in Eastern Asia, the heavy covering of snow which for months enfolds them in the northern parts of the country and everywhere in the mountains, must be of great importance, as *e.g.* for the Cucurbitaceæ, whose green exposed parts must be nipped by the first rimes of autumn, but whose roots are protected by the snow against frost. We must bear in mind that even in Yezo the thermometer only occasionally falls to -16° C., and that in the cold air, while beneath the snow such low temperatures never occur.

Evergreen shrubs, such as *Daphniphyllum*, *Aucuba japonica*, *Ilex integra*, *I. crenata* and others, are found beneath this protection, and in the moderate cold of winter even near Hakodate, and several of them indeed even in southern Saghalien.

Of special interest in this connection is the remark of Maximowicz (*Bot. Ztg.*, 1881, p. 275). "It is striking that of the first three shrubs specimens from one to two feet high have been found, not in the forests of valley-bottoms, but exclusively at a height of some 2,000 feet above it, *e.g.* near Mohidzi and Idzi Nowatari, in forest indeed also, but still obviously under a thinner snow covering than

they could have in the valleys. In my opinion this is to be explained by the slighter degree of cold up there in winter, spring and autumn, since in narrow valleys the air from the heights flows down after being cooled by radiation, as has been proved in Europe by direct observations upon temperature. This circumstance may also be the cause that in Saghalien and Amurland the heights are covered with foliaceous trees, the low grounds with conifers, so that the *Golde* (a small Mongolian tribe) of Manchouria simply denominate foliaceous woods as mountain-woods (Churren-mo), conifer-woods as lowland-woods (Duenta-mo).¹

It is however the surprisingly large number of woody plants, whose welfare we must, without troubling ourselves as to their origin, attribute above all to the favourable climate. The northern forms have again found here their wonted long winter rest, the tropical forms the necessary warm summer rains. In a climate with severe winters the latter,—in a climate with dry hot summers most species in both categories,—would not flourish.

We may therefore certainly assume that in proportion as the character of the climate changes, as we go inland from the Eastern Asiatic coast, the contrast between severe winters and hot summers has been more sharply developed and the quantity of the rainfall diminishes; the character of the vegetation also essentially changes. The Chino-Japanese region of Grisebach embraces besides Japan, the Russian coast-province and Corea, by no means the whole Chinese empire, but only China proper, which is subject to the influence of the monsoons. I prefer therefore the designation "north-eastern monsoon-region." This botanical region extends according to my view from the Fokien Strait and the mountains of the Island of Formosa to near the mouth of the Amur, and embraces all the coast land and islands round the Yellow Sea and the Sea of Japan, much more therefore than "Kämpfer's Kingdom, the region of the Camellias and Celastrineæ" according to Schouw. We may call it the kingdom of Magnolias, Camellias and Aralias, for though the three families which are represented by these names find their principal development in the tropics, yet there they are scattered over an enormous extent of ground, and form by no means so characteristic and important a constituent of the vegetation as in the north-east monsoon-district. As compared with these, even the part played by the Magnoliaceæ, Ternstroemiaceæ and Araliaceæ in North America (and that as regards also the number of genera and species) appears to be less important. The north-east

¹ It is well known that the observations upon the cold of the winter of 1879-80 and its destructive effects have recently brought out the surprising fact that in winter under certain circumstances a markedly lower degree of cold may prevail by night upon heights than in the valley-bottoms, and that in consequence of this many plants may be spared there which perish below. This phenomenon which in Europe always forms an exception, seems in North-Eastern Asia, on the contrary, to be the rule.

monsoon-district is further the region of *Akebia*, *Acer*, *Polygonum* and *Lilium*, as the occurrence of the first-named genus is confined to it, while the three other genera are nowhere else represented in so many varieties and such quantities. Finally we may fittingly and properly call this region the Realm of the *Saxifrageæ*, although the number of species of the genus *Saxifraga* in Japan is a comparatively trifling one, and it has in the composition of the Alpine Flora by no means the same importance as in the high mountains of Europe. But the great abundance of forms of the family, as exhibited in 14 well established genera, is not even approached in any other region of vegetation.

This north-east monsoon-district may be divided, according to the two parts of the sea about which it extends, into a southern and a northern zone. The former, the Yellow Sea district, is the home of the *Camellia* and other evergreen *Ternstroemiaceæ*, of the winter-green *Magnoliaceæ*, *Araliaceæ*, *Laurineæ*, of the laurel-leaved oaks and of the bamboo-cane. In the northern zone, the district of the Sea of Japan, we find those members of these families which renew their leaves periodically, as *Actinidia*, *Stachyurus*, *Magnolia hypoleuca* and *M. Kobus*, *Schizandra*, *Kadsura*, *Cercidiphyllum*, *Trochodendron*, *Acanthopanax*, *Lindera* and instead of the lofty bamboo-cane, various species of dwarf bamboo and *Polygonum*, particularly *P. cuspidatum*, *P. Sieboldi* and *P. Sachalinense*. Owing to the Kuro-shiwo, the zone of the *Camellias* runs farther northward near the Japanese islands, than on the side of the continent.

Now taking the acicular trees also into consideration, the districts around the Yellow Sea are the home of the *Sciadopitys*, *Cryptomeria*, *Thuja* and *Biota*, as well as of several *Retinosporæ*, of the *Ginkgo* and the species of *Podocarpus*, while the district of the Sea of Japan may be denoted the region of *Pines*, *Firs*, *Larches*, *Yews*, and *Junipers*. The first named needle-trees belong for the most part to very ancient types, which were found, as early as the age of the middle Jura formation, in the district of the present Sea of Japan, and only pushed their way further south at the close of the tertiary period.

This brings us to our final observations as to the explanation of the relations of the Flora of the north-eastern monsoon-district to that of the Atlantic forest-region of North America, in which we essentially follow the views of Asa Gray.

From the examination and comparison of the numerous middle and neo-tertiary plant-remains, which have been found in hundreds of places, and in the most different latitudes in all circumpolar countries, and in the temperate zone of the northern hemisphere, the following important results have been reached:

1. The climate of the temperate and mild zones of the northern hemisphere was in the tertiary age a much more uniform, warmer and probably also a moister climate than it is at present.

2. The vegetable remains, which testify to this, belong essentially to the same genera and species, whether they are found, *e.g.* in the peat formations of Middle Europe, Greenland or Siberia.

3. The forests from which they are derived and which ran up far into the Polar region, consisted of a varied mixture of different evergreen and deciduous types. Thus Europe possessed towards the end of the tertiary age, besides oaks, maples, ashes, willows etc., also Magnoliaceæ, Laurineæ, Juglandaceæ, Hippocastaneæ, Taxodiæ, Sequoias, and other types which no longer form part of its existing Flora, but which have maintained themselves in the forests of North America and of the north-east monsoon-district.

4. It is not therefore to an immigration of the plants of the latter district into the Atlantic forest region of North America, or conversely, that the close relationship in the physiognomy, the genera and species of their plants is to be attributed, but to the circumstance that both the southerly direction of their mountains and perhaps other not yet sufficiently understood causes were favourable, during the ice age, to the conservation of a considerable portion of the tertiary Flora. In the western and middle portions of the old continent, however, the mighty girdle of mountains, which extends from west to east between 35° and 47° N., and whose most conspicuous members are the Pyrenees, the Alps, the Caucasus and the Thien-shan mountains, formed for the forest vegetation of the northern continent a mighty barrier, beyond which they could not retreat towards the south. When, therefore, with the entrance of the ice age, powerful glaciers were developed from this barrier, and opposed themselves to the advance of the Arctic ice-masses, the tertiary Flora was here destroyed.

5. As the physiognomy and the community of genera and species even in the forests of the north-east monsoon-district and of North America, date from the tertiary period, and owe their survival through the ice age to similar favourable conditions, so too the continuance of their existence is to be ascribed to analogous climatic conditions in the present: for as regards the height and distribution of temperatures and of the yearly rainfalls, there are throughout the entire northern hemisphere no two districts which, although they are so far removed from each other in position, approach each other so nearly as the north-east monsoon-district and the portion of the United States between the Rocky Mountains and the Atlantic Ocean. In particular warm south-west winds bring to both regions during the summer those abundant rains, which are especially adapted to promote and maintain their interesting vegetable life.

VII

FAUNA.

A. GENERAL FEATURES.

IN the animal world of Japan we meet again a whole series of remarkable forms, extending from anthropoid apes downward to simple protozoa, species whose correspondence or morphological relation to other species often widely separated in point of space and whose geographical distribution and association engage our interest. The land Fauna points principally to the neighbouring continent, to North China, Corea, and Manchouria.¹ "Similarity of habitus with the European parent is evident in nearly all classes," says E. von Martens, "community of species especially in predatory animals and birds of prey, aquatic birds and frogs; it is easily explained by the uninterrupted distribution of them over the north of Asia." But while in particular classes, *e.g.* the beetles, we can observe no strict limit of the distribution of species, along the long line from west to east, through Europe and all the north of Asia to the farthest outposts of this continent, other representatives exhibit types which are no longer found in Europe, such as the Giant Salamander. Thus then the Fauna too of Japan, with all its relationship to that of its neighbours and to the entire northern half of the old continent, has nevertheless its own peculiar stamp, though this does not find equally strong expression in the various classes of animals. It is seen in the absence of many continental genera, in the variation of common species, and in the persistence of others, which in neighbouring countries seem to have disappeared and to be reckoned with extinct races. So long however as Corea is zoologically still *terra incognita*, comparative observations upon the number and differentiation of Japanese species as compared with those of the continent must rest on an uncertain basis; for the importance of that peninsula as a connecting link can hardly be over-estimated.

¹ Wallace rightly considers them as belonging to his Palæoarctic region and from the fact that even in the extreme south of Japan the most numerous forms of mammalia, birds and insects are modifications of Palæoarctic types, infers that the earlier connections by land between Japan and the continent must have been more in a northerly than in a southerly direction. The constitution of the Flora and the fossil remains from the Jura-formation also point, as we have seen, to such a connection with Siberia and Amurland.

The general rule, according to which the Fauna and Flora of islands are poorer than those of the neighbouring continent, from which they are usually derived, is hardly applicable to Japan. Here in the insect world, also, we are surprised by a great wealth of forms and individuals, so much so that an industrious collector of beetles, butterflies, neuroptera, etc., finds a greater number of species in a circuit of some miles near Tôkio, than are exhibited by the whole British Isles, with which Japan is sometimes compared in point of size, and of position relatively to the nearest continent.

The sea Fauna is particularly rich in species and for the most part also in individuals, especially as regards fish, crustacea and mollusca. Here again, as in the case of the Flora, the tropics and the polar region—the Philippines with Formosa and Kamtschatka—to a certain extent, join hands, inasmuch as the position and longer extension of the islands, the sea-currents and climate, produce a partial contact and intermixture of the two zones.

Though on the land and in the fresh waters the character of the temperate zone of the old continent predominates, as regards the animal world, this is by no means the case with respect to the marine Fauna. Here, on the contrary, tropical and sub-tropical genera and species predominate, and we find many more species that are also met with in Malayan and Indian waters, than such as come from the Polar Sea. Alongside these occur numerous endemic Japanese species, although we may assume that a more thorough examination of neighbouring regions will indicate for many of them a much larger field of distribution.

When we find in the malacological writings of Woodward, Adams, Lieschke, von Schrenk and others, Japan exhibited as a special province, this province must be limited northward by the Tsugaru Strait for the eastern side, and by La Pérouse Strait for the western side of the island of Yezo, since, as we showed in a previous chapter, the Kuro-shiwo on the one side, the cold northerly currents on the other, make themselves felt so far, while marine organisms principally depend upon the sea temperatures as influenced by currents. This northern limit may also hold good for the fish Fauna with an essentially tropical and sub-tropical character and the “Realm of the Scomberoidæ” as Schmarda calls the Chino-Japanese waters may here find its natural conclusion; for the very mackerel-tribe, which has so many species and so much importance in this region is, in accordance with its predatory mode of life, bound to the surface of the sea and the currents prevailing there. But in these “zoological provinces” we have to do altogether with the animal world of only the uppermost sea-stratum, reaching at the utmost a depth of 80–100 fathoms, this being the maximum depth of all the Japanese bays and the whole Inland Sea, whose temperature is completely subject to the influence of solar heat and sea-currents. For greater depths, how-

ever, we have only to take into account the rapidly decreasing temperature which effaces these typical differences of the zones and carries Boreal forms much farther southward than was suspected before systematic deep-sea investigations; so that with the decrease of temperature we find repeated, as it were, in the ocean, what occurs on the continent with increasing altitude,—the ascending of animal and vegetable species of higher latitudes toward the mountain summits of milder climates.

Where, however, is the southern limit for the Fauna of the upper sea-stratum of Japan to be fixed? All attempts to fix such a limit fail to satisfy the requirements which must be met by any sufficient answer to this question, and rest more or less upon arbitrary caprice. For towards the south we observe a very gradual transition into the tropical region of the Pacific and the Indian Ocean, into the "Realm of Corals and Holothuriæ," the Indo-Pacific province of Woodward, to which Japan, particularly as regards the character of its molluscs, decidedly belongs.

B. MAMMALS.

With regard to the Japanese Mammals which have been collected by von Siebold, and pictured and described by Temmink and Schlegel, the list of them, containing in round figures 50 species, has received no noteworthy addition in recent times, despite numerous journeys undertaken through parts of the country which were earlier closed to Europeans, though indeed the notices as to the habits and distribution of particular species have been considerably corrected and supplemented. Our zoological knowledge of the interior is no longer confined, as it was even 15 years ago, to the reports of the Japanese, and has made many advances, especially in the department of invertebrate animals.

Of the representative of the *Quadrumana*, *Inuus speciosus* Tem., the Saru of the Japanese, von Siebold and von Martens supposed that the 35th or 36th parallel was its northern limit. It is found, however, as I showed some years ago,¹ to beyond the 41st degree of latitude, as far as the Tsugaru Strait, in parts of northern and north-western Hondo, where in winter the snow often lies 15 to 20 feet deep and the temperature for at least 100 nights falls as low as 2–12° C. below zero. In late autumn this red-cheeked ape not unfrequently anticipates the peasant in harvesting his pulse and millet on the forest-verge; but in winter the fruits of berry-bearing shrubs and climbers, but above all the fruit of the *Cupuliferæ*, chiefly provide it with the necessary nourishment, until it is itself, after falling a prey to the gun or trap of the hunter, skinned and eaten.

¹ Rein, Notizen über die Verbreitung einiger Säugethiere auf Nippon, in "Der Zoologische Garten," XVI. (1875), p. 55.

The Saru is everywhere a familiar animal, whose name is found applied in almost all parts of the country, in the designations of rivers, places and plants. Thus the most important left tributary of the Kitakami is called the Saru-ga-ishi-gawa (Ape-stone-river), and there are places such as Saruhashi (Apes'-bridge), Saruhara (Apes'-field), and the like. A large boletus found on different kinds of trees in the Nikkô Mountains is called Sarukoshikake (Ape-stool), the *Stuartia* and *Lagerstroemia indica* bear the name of Sarisuberi (Ape-slider), the fruit of several *Actinidia* are called Sarunashi (Ape-pears) and some species of *Smilax*, *Sarumame* (Ape-beans).

In China is found a near relative of the Japanese ape, namely *Macacus* (*Inuus*) *Tscheliensis* M. Edw., almost as far northward, while, as is well-known, a third species (*Inuus ecaudatus*) is still occasionally found in Gibraltar, although on the other hand it has quite disappeared from the rest of Southern Europe. It is remarkable that as the apes here mentioned are near relatives, so too the palms which extend farthest northward in a wild state in the extremest portions of the old continent (*Chamærops humilis* and *Ch. excelsa*) belong to the same genus.

In the class *Chiroptera* (Japan. Komori) ten Japanese species are described, two of them being frugivorous, which are removed however from their Malay relatives only as far as Southern Kiushiu, or to Munintô; of the bats proper there is no species anything like as common as the pipistrel (*Vesperugo pipistrellus* Buff.) with us.

Six species of *insect-eaters* are known, belonging to the genera *Talpa*, *Urotrichus*, *Crossopus* and *Sorex*, while the hedgehog, which is common even in China, is wanting. The Japanese mole, *Talpa Wogura* Tem. and Schl. (Japan. Mugura), is very closely allied to its European congener, but has a brighter, almost gray covering. In colouring more like our own, an interesting connecting link with the shrew mice, with which it agrees in the formation of the jaws and snout, is *Urotrichus talpoides* Tem., a creature only $3\frac{1}{2}$ inches in length, dwelling in the middle hill countries in all the large islands, though it nowhere occurs frequently, throws up no hills, and is called by the natives aptly enough Yama-mugura (mountain-mole). A larger shrew mouse, which inhabits not only the banks of the streams, but also the margins of mountain-springs, is *Crossopus platycephalus*, the Kawa-nedzumi (river-rat) of the Japanese.

Of the true *carnivora*, the country exhibits very interesting species of the bear, the dog and the marten, while wild cats are entirely absent.¹ Though the tiger (*tora*) constantly reappears in pictures and proverbs, these allusions are derived from China through Buddhism and the Chinese Zodiac, and do not point to its earlier existence in Japan. Of bears (*Kuma*) three species are known; the *Kuma* (*Ursus japonicus* Schl.), the Oki-kuma or Aka-kuma (*Ursus*

¹ Wallace is misinformed on this point.

ferox) and the ice-bear (*Ursus maritimus*). The last named however is only occasionally carried by the Arctic current (from Behring's Straits?) to the Kuriles.

The Kuma or common Japanese bear, black with the exception of a white spot on the throat, attains a length of nearly two metres, and is found pretty frequently in all the higher mountains, especially in the border mountains of Aidzu. Its skin is often offered for sale, and its flesh, like that of its relatives, is eaten fresh and smoked. The Shiguma (also called the great bear, Oki-kuma, or red bear, Aka-kuma) is the brown Yezo bear, the grisly of North America. It inhabits Yezo and the Kuriles and is still very common there. The Ainos kill it, as they do the deer, with poisoned arrows. They prepare the poison from Udzu, the roots of the Torikabuto (*Aconitum Fischeri* Rehb., *A. Napellus* Thbg.). Formerly they were accustomed to crown the pales of the fences around their dwellings with the skulls of slain animals, while young bears were frequently bred up by them and received divine honours as supernatural beings.

The Japanese badger (*Meles Anakuma* Tem.) is especially common in Echigo and Akita, but is also widely spread elsewhere. It is hunted with dogs in autumn, the fat flesh is eaten, and the beautiful fur, which reminds us of the raccoon, is used for protection against the cold. The name used by von Siebold, *Anakuma* (cave bear), is not very common, but it is sometimes called *Sasakuma* (bamboo bear) after *Bambusa Kumasasa* Zoll., though the ordinary designation is *Mujina*, which is not the name for *Nyctereutes viverrinus* as von Siebold says.

We know little as yet as to the occurrence and habits of *Canis hodophylax*, the Japanese wolf or Yama-inu (mountain dog), which is much inferior in size to its European congener, and belongs to the rarest mammals of the country, yet its howling is said to be frequently heard in the mountain woodlands of Yamato.

A familiar, exceedingly frequent and very interesting figure is that of the Kitsune or fox (*Canis vulpes*), which is found even in the gardens of the large towns, and, thanks to its cunning and thievish inclinations, plays a much more popular part than even in the popular speech of Europe. In virtue of his cunning, Kitsune was enrolled among the guardians of the temples, and images of him in wood or stone in a sitting posture are posted at the entrances, while on the other hand he is honoured as the messenger of Inari-sama, the god of harvest, and especially of the rice-field. The little temples dedicated to him are frequently found on slight elevations in the midst of the fields, surrounded by bamboo bushes or a few trees, principally pines, and our attention is directed to them by two foxes in stone sitting on the two sides of the narrow path which leads from the road to them. A post of especial favour in the service of Inari-sama is assigned to white foxes, and any one who at any time in the course of his life

meets such a rare Albino, considers it a particularly lucky circumstance. In the reverence paid to Inari-sama, however, the farmer seems anxious to resist the malice of a dreaded devil rather than to offer homage to a beneficent god.

Universally shared by all classes alike is the belief in the capability of the fox to divert the traveller from the right path, to make him wander about in uncertainty, and to lead him to sure destruction. This quality and a high degree of cunning is also attributed to a peculiar fruit-fox of China and Japan, the raccoon-dog or Tanuki (*Nyctereutes viverrinus* Tem. or *N. Procyonoides*), which is likewise very common. The mode of life of this interesting creature resembles that of the badger in the hill countries. It dwells even in the neighbourhood of the large towns, reminding us in many respects of the American raccoon, has an equally valuable but much darker fur, and is also eaten, which is not the case with the foxes and dogs.

The marten-tribe exhibits as common animals the Ten (*Mustela melampus*), the Itachi (*M. Itachi*), the fish-otter or Kawa-oso (*Lutra vulgaris*), and farther north in Yezo and the Kuriles, the Yezoten (*M. brachyura*), and the sea-otter or Rakko (*Enhydria marina*). The Itachi is the Japanese weasel, and so far a benefit to the country, that it prefers to run about the floors of the houses and there hunt the numerous rats.

The classes of *Marsupia* are not represented in Japan, but there are a good many species of *rodents*. Besides two squirrels or Ki-nedzumi (tree-rats), we observe two flying-squirrels (*Petromys*), namely the Musasabi (*Pt. leucogenys* Tem.) and the Momodori, *i.e.* peach-bird (*Pt. momonga* Tem.). The pretty light-shunning Momodori lives, like its larger relative, through the day in hollow tree-trunks in the mountain districts, especially of Nikkô and Shinano, and, as well as a species of rell-mouse (*Myoxus elegans* Tem.), is by no means rare. More to the south, *e.g.* in the mountain woodlands of Yamato and Shikoku, lives the Musasabi, which in Japan bears the name Bantori (night-bird) and in size equals our squirrel.

The mice are much less numerous, there being fewer species of them than with us, and are very insignificant as compared with the uncommon abundance of the migratory rat or Nedzumi (*Mus decumanus* Pall.). The rat is scarcely ever wanting from any Japanese house, and is a real plague, which at night rummages everything, makes its way even into the living and sleeping rooms, and is a greater nuisance than smoke and fleas.

Hares, Japan. Usagi (*Lepus brachyurus* Tem.) are to be found everywhere, although they are by no means so numerous as in the open German plains. Apart from their shorter ears, they are exactly like our hare. Besides this species there seems however to occur a second, the mountain-hare (*Lepus variabilis* L., or a related species); for Satow and Hawes observe in their "Hand-book for Central and Northern Japan," p. 252: "Hares, which

turn white during the winter abound on the mountain (*i.e.* Miôkô-san)." In Akita also white hares are said to be found in winter.

The wild boar (*Sus leucomystax* Tem.), the only representative of the cloven-footed animals, likewise so nearly approaches its European congener that the trifling variations hardly justify the establishing of a new species. The Japanese call this creature, which is very common all over the country, but particularly in the north, Ii or Shishi. In many districts they have to protect their ripening crops against its devastations at night by keeping up open fires along the edge of the forest.

Two *ruminants*, *Cervus Sika* Tem. and *Antilope crispa* Tem., complete the number of terrestrial mammals. The Japanese stag, or Shika, a splendid creature, smaller and slenderer than our stag, for the most part with eight-branched antlers, occurs frequently in many parts of the country, especially in Yezo, where it feeds in winter chiefly upon an *Arundinaria bambusoides* S. and Z., which forms the undergrowth in the mountain woodlands and in Yezo often covers the country for great distances. According to Böhmer, in the winter of 1874-5, on the plains near Horoidzumi, in the province of Hidaka, on the south coast of Yezo, the scarcely credible number of 30,000 deer were killed.¹ Of the five known and nearly related species of the genus *Nemorhedus* or East Asiatic antelopes, the *Antilope crispa* Tem., Kamoshika or Kurasishi, called in the south also Niku and Nigu, is found in Japan. From their form and hair these creatures might be called chamois-goats. The Kamoshika may be found in all the high mountains of Japan, frequently in the mountains about Echigo, *e.g.* in the Mikuni-tôge and in the Nikkô mountains. Shy as the chamois and ibex, like them it usually confines itself to the highest and most inaccessible parts of the mountains, and is hunted in the winter, when deep snow and beasts of prey, especially wolves, drive it down into the valley.

Of marine mammals eight species are mentioned as occurring on the shores of Japan, especially in the Kuriles. The most remarkable of them probably is the *Physeter Tursio*, which is distinguished by a high dorsal fin, and which Captain St. John frequently saw on the east coast of Yezo. According to this observer, it is caught with nets before being harpooned and its flesh is eaten.

Cattle-breeding in Japan, as in most countries where Buddhism prevails, still lingers far behind agriculture. The ordinary domesticated animals are: the horse (*uma*, pronounce m-ma), a small race, allied to the Mongolian, which extends as far as Finland and Esthonia; the cow (*ushi*), which is kept principally as a beast of draught and burden, not at all for its milk, and but little for the

¹ Böhmer, Report to the Kaitakushi, by H. Capron. Tokei, 1875, p. 312.

sake of its flesh ; the pig (buda), which likewise plays a subordinate part, the street dog (inu), a toy dog (chin), the cat (neko), particularly that with a short, naturally stunted tail, the rabbit (usagi), the fowl (tori, also the bird generally, on-dori, the cock, men-dori, the hen), the duck (ahiru), the pigeon (hato), the silkworm (kai-ko), the bee (hachi). Besides these, there are frequently kept, chiefly for pleasure, white or coloured mice (hazuka-nedzumi, *i.e.* twenty-day rats) and rats (nedzumi), under the name Koma-nedzumi (fancy mice), and less often singing birds.

Of our domesticated animals there have accordingly hitherto been wanting: the ass (usagi-m-ma), the mule (roba), the sheep (rashamen, hitsuji, menyô), the goat (hitsuji, yagi), and the goose (gachô).

C. BIRDS.

A great deal has been done recently to increase our knowledge of the Avi-fauna of Japan, especially by Captain Blakiston at Hakodate, and H. Pryer at Yokohama. In their "Catalogue of the Birds of Japan," in the *Transactions of the Asiatic Society of Japan*,¹ and in an elaborate essay on the subject² in these *Transactions*, they enumerate 359 species. Many of these agree with European species, which are distributed over a great part of the old continent; others show such slight differences in size, colour of plumage, etc., as the jay, cuckoo, and robin red-breast, that they can hardly be allowed to rank as independent species; others again, such as the pheasants, link themselves specially with the North Chinese Fauna, while tropical genera are only occasionally represented.

In the towns and villages sparrows (*Passer montanus* L.) and ravens (*Corvus japonicus* Bp.) are the regular standing guests, while the house-swallows only show themselves through the summer; and others, as *Milvus govinda*, Jap. Tombi, a relative of our kite, only show themselves in winter. At Hakodate the beautiful thrush (*Heterornis pyrrhogenys* Tem.) is said to vie with the sparrows in the frequency of its occurrence.

Sparrows (Suzume) and ravens (Korasu) exhibit their familiar habits, whereas the kite (Tombi), which much resembles our buzzards, is very striking. This bird of prey keeps company with the sparrows and ravens on the roofs of the low houses, and in the courts and streets, and contents itself with the refuse on dunghills and rubbish-heaps. It also fishes with gulls and cormorants on the sea-shore; but as soon as the mild spring breezes blow, it hastens away to higher regions, its old low society and mode of life being abandoned and forgotten. Following its nobler relatives, the falcons (taka) and eagles (washi)—vultures are not found—it soars high into the air and betakes itself with its mate to the tops

¹ Vol. viii. pp. 172-242.

² Vol. x. pp. 84-186.

of lofty coniferous forests, or to the mountains, for the brooding season.

Our blackbirds and singing thrushes are absent, but a great number of other species of *Turdus* inhabit the country, and, like a starling (*Sturnus cineraceus*) and a very common slate-coloured pigeon (*Turtur gelastes* Tem., Jap. kiji-bato), come for the winter in great numbers to the trees and shrubs near the houses.

The house-swallow (*Hirundo rustica*, Japan. Tsubakuro and Tsubame) finds free access throughout the summer to the inner woodwork of the houses, and makes its nest either there or upon little boards which are attached for it to the roof. A relative of this bird (*Chelidon Blakistonii* Swinh.) is found in the higher mountains, where it often takes up its abode in old crater-walls, as on Asama-yama. In the open plains of Tokiô there appear from time to time, especially towards the spring, whole flocks of water wagtails (*Sekerei*), particularly *Motacilla lugens* Tem., which is very nearly allied to our *M. alba*, while the yellow *M. barula* L. more often appears in pairs.

Of the shy corvine birds, the silken-tail (*Bombycilla*) appears not to approach Japan. The woodchat (*Modzu*) and jay (*Kakesu* or *Kashi-dori*, i.e. acorn-birds) occur in several species, and magpies (*Korai-garasu*) are in plumage scarcely, in their habits not at all, different from ours. The name *Korai-garasu* (Corean raven), which is mentioned even by Kaempfer, is supposed to point to an earlier introduction of the Pies from Corea. I found this bird, which is uncommon in Japan, most frequently in Kiushiu, near Shimabara Bay, where, on the 11th of April, I discovered a nest containing seven addled eggs, and can therefore confirm the statement of Blakiston and Pryer—"the Japanese say that such a bird exists on the island of Kiushiu." The cuckoo also, or *Hotongiso* (*Cuculus canorus* L.), is not wanting in Japan, though it is less common than with us.

The other climbing birds occurring in Japan, above all two species of pecker, the ice bird and the hoopoo, correspond with familiar European species, or are very nearly related to them. The parrots, however, in Eastern Asia have not followed their usual society of apes and palms, do not even occur in Kiushiu, and thus do not go so far northward as in America.

Amongst the many species of singing birds we find only a few specially favoured songsters. Conspicuous among them is the Unguisu (pronounce unguis, *Cettia cantans* T. and Schl.), the Japanese nightingale. This delightful bird is smaller than our "master singer," which it resembles in its mode of life and song, and is more like a white-throat. Its back is olive green mingled with gray, its belly is grayish white. The Unguisu is extraordinarily common, and is distributed over the whole country, from the garden and temple groves near inhabited places, through the hilly districts up into the mountain woodlands, as far as even underwood ascends. In April and May, when the foliage is everywhere

renewed, it appears in the plain ; and when in late summer its song ceases to be heard there, it still continues to rejoice us near the snowdrifts in the high mountains. This song, although less sonorous than that of our nightingale, begins, like it, with low and flute-like tones, and resembles it also in the great variety of notes ; so that if we listen to a half-dozen or more of these birds singing around us, some at the beginning, others in the middle, and others again near the end of their song, we could imagine that we were listening to the voices of as many singers with different voices.

Of other Tenuirostres we find in the woods the Japanese red-breast (*Lusciola akahige* Schl.), called Koma, the blue-bird or Ruri (*Lusciola cyanura* Pall.), the golden-crested wren or Itadaki (*Regulus japonicus* Bp.), various kinds of tomtits, Japan. Kara, and others. With regard to the golden-crested wren, I learned through an old Japanese naturalist in Kaga, that it returns from its southern migration as early as the end of January to Owari, but only at the beginning of March to Kaga.

More numerously represented than the Tenuirostres are the Finches (*Fringilla*), of which some species are only found high in the mountains, and must be more carefully studied. As a songster, also, deserves to be mentioned a species of lark, Japan. Hibari, namely *Alauda japonica* T. and S., which approaches our field lark in its mode of life.

Remote from the seats of human civilization, and varying from the habits of other singing birds, in particular too from those of its near relations the thrush species, we find further in Japan the water-ousel (*Cinclus Pallasi* T.) which differs little from *C. aquaticus*, and of whose lonely mode of life Brehm sketches so true and attractive a picture. On the clear mountain-streams we may frequently observe the gaiety and animation of this excellent diver,—which is distributed over the whole north of the old world,—and be delighted by its graceful movements, now on the dry projecting cliffs, and now in the water that washes them.

The frequent occurrence of the wild pigeon has been already mentioned. Of the Gallinaceæ we find quails (*Udzura*), heathcocks (*Tetrastes bonasia* L.) or Yezo-Rachiô, ptarmigans (*Raichô*), woodcocks (?) (*Yama-shigi*), and pheasants (*Kiji*). The ptarmigan inhabits only the highest mountain-summits and is a rare phenomenon. Only twice—on Haku-san and On-take—had I an opportunity of observing it and of recognising its correspondence with *Lagopus mutus* Gould. In Yezo and the Kuriles it probably occurs much more frequently, although I have no information on the subject. The heathcock has only been reported from Yezo.

Amongst this whole group of birds the pheasants undoubtedly attract the special interest, not merely of the sportsman, but also of the naturalist. In two species, *Phasianus versicolor* Tem., the *Kiji* proper, and *Ph. Sömmeringi* Tem., called the Yamadori (mountain-bird), we find this remarkable genus

represented throughout all the islands of the Japanese Empire northward to the Tsugaru Strait, though the first named, or green pheasant, is much commoner than the copper pheasant (Ph. Sömmeringi). In all the hilly districts, and particularly on the Hara, we hear in summer its cry "Kiji," often from five or six different spots in quick succession. As winter approaches, many retire into the reed-beds of Phragmites (Yoshi), and other grasses along the rivers and paddy-fields, and even into the gardens of the towns, and it is then no difficult feat for a huntsman with a good dog to bag as many as from 8 to 12 head in a few hours.

Thus then, in this respect also, the Japanese island-world is closely linked with Corea and China, the "Realm of pheasants" *par excellence*. The peacock, however, which so often meets the eye in illustrations, though seldom kept as an ornamental bird, was only introduced from China at the end of the 6th century, and is a stranger to the Japanese Fauna, just like the Cursors, with which the mythological bird of happiness, Hô-ô, so frequently represented in pictures, has no connection.

Of the waders, two genera in particular, which are distributed over an extensive region of the Old World, attract our attention from the frequency of their occurrence and the popular favour which they enjoy—the cranes (Tsuru) and the herons (Sagi). No other creatures, if we except perhaps the tortoise, are so frequently found represented in picture-books and on the most varied products of art-industry, and no other illustrations give us a better insight than these into the deep observation of nature and the great talent of the Japanese in reproducing vividly and truthfully what they have seen.

The crane (*Grus leucauchen* T., Jap. Tanchô), white, save the red crown, black tail-feathers and black upper neck, a slender noble figure, was and is sacred among the Japanese, and a symbol of longevity. It is met with much oftener than the Manadzuru (*G. Antigone* L.), and Nabe-dzuru (*G. monachus* T.). The common crane (*G. cinerea* Bechst.) and the white crane (*G. leucogeranus* Pall.) are likewise rare; and the same is true of the Japanese stork (*Ciconia Boyciana* Swinh.), which I never met with.

Of the various herons, the silver herons, which are likewise protected, are very common. They bear the collective name Sagi, and appear in three species (*Herodias modesta* Gray, *H. intermedia* Wagl., and *H. garzetta* L.), which are distinguished as Ô-Sagi, Chiu-sagi, and Shira-sagi. By far the commonest is *H. garzetta*. As in India and Egypt, the silver herons fearlessly accompany the labours of the peasant in the rice-fields from spring to late autumn, and, with their brilliant white plumage, form characteristic figures in the landscape, particularly in the height of summer, when their backs peep out from the tender green of the rice. Much more rarely we find the solitude-loving gray heron

(*Ardea cinerea*) which usually appears only after harvest in company with other marsh and water-fowl in the rice-marsh. The cosmopolitan Goi-sagi (*Ardea nycticorax* L.) also is not wanting. Like the crane, it often establishes its home in colonies on the lofty pines and other trees in park-grounds, and by its nightly screaming and other unpleasant qualities, becomes a real nuisance to people around, despite which however it is amiably endured by them. Thus I saw *e.g.* a settlement of these birds in the palace-park of Kôchi, on the island of Shikoku, with 80-100 nests. The Hira-sagi or spoonbill (*Platalea major*) appears to be much rarer. Plovers are found, but are not common, while sand-pipers and snipe, denoted by the general name Shigi, form a widely spread brotherhood, which is hardly ever missing from a marshy rice-field throughout the winter. Finally, we must also mention the common waterhen or Ban (*Gallinula chloropus* L.).

Swimming birds are, as we should expect, very numerous. Leaving out of account the gulls and kindred inhabitants of the sea and shore regions, wild ducks and geese especially strike us by their great frequency. In a pond 10-12 miles north of Sendai Bay, on an autumn day I found these birds in such quantities that at least 10,000 rose to a pistol shot. Even in the castle-moats and ponds in the towns, *e.g.* in the heart of Tôkiô, wild ducks (Kamo) and geese (Gan) are found in great flocks all through the year. Nay, the otherwise shy and cautious U, or cormorant, whose evil smell and dark gray plumage do not exactly recommend it, here finds protection and is everywhere found as a third party in the society. It is a particularly dexterous diver and fisher, which by no means confines its hunting ground to inland waters, but can also appreciate seafish. Like crows and herons, it loves to spend the breeding season in colonies upon trees. I found it trained and employed in catching fish only to a limited extent in Owari and Mino, which fact may be due to its great uncleanness,—a quality which the Chinaman, less sensitive in such matters, more easily overlooks.

D. REPTILES AND BATRACHIANS.

These in the Japanese animal world, as in that of China, are not particularly prominent, either by the number of their species or of individuals. All the more remarkable is the way in which the 30 species are made up, with their relations to the Indian, North American and North European Fauna. The seven marine members—three turtles and four sea-snakes—point to tropical waters, and make their way in summer, with the south-west monsoon and the Kuro-shiwo, as far as the southern coasts of the

great islands: a *Trionyx*, a *Gekko* and a *Trionocephalus* point to the Indian continent, while the relations of several Salamanders are with North America, and those of the remainder with North Europe and North Asia. If we here follow the systematic order, the first to be noticed are three marine and two freshwater turtles, viz. *Chelonia imbricata*, *Ch. viridis* and *Ch. cephalo*, with *Trionyx stellatus* and *Emys japonica* Schl.

The rare occurrence of the marine turtles (*umi-game*) is confirmed on all hands, and may be inferred from the inaccurate Japanese pictures of them as well as from the fact that all the manufactured tortoise-shell (*bekkô*) in Japan is imported. Obviously in the case of the valuable *Caret-turtle* (*Ch. imbricata*), and the much larger *Ch. cephalo* (*Shôgakubô*), this is the northern limit of their excursions from their tropical home. The same remark applies to the four sea-snakes (*umi-hebi*), viz. *Hydrophis pelamis*, *H. striata*, *H. pelamioides* and *H. colubrina*, which have never been observed beyond the region of the warm sea-currents.

Of the freshwater tortoises, the Indian *Trionyx stellatus* Schl., which is usually called *Suppon*, occurs only in the rivers and ponds of Kiushiu, Shikoku and southern Honshiu, while *Emys vulgaris japonica* Schl. (*E. japonica* Gray) has its northern limit in Yezo, and is everywhere, if not common, at all events known. It does not essentially differ from the widely spread South European *E. palustris*, except in its much darker colouring. It bears the name of *Kame*, is a symbol of long life and happiness, is very often pictured, frequently with young ones upon its back, on fabrics, lacquer, clay and bronze wares, and is one of the most popular of animal figures. In many a sacred temple-tank it leads, under the protection of priests and pious pilgrims, a happy existence, and attains a great age. Here it not unfrequently happens that *confervæ* attach themselves to the shell of old specimens, and develope, so that as the creature swims about they surround the hinder part of the back like a crown of long green locks.

With the general appreciation of the tortoise, it was natural enough that in Buddhist Eastern Asia such notable specimens should enjoy especial favour. Under the name *Mino-game* (mantle-tortoise), and as the symbol of peaceful old age, one of the seven felicities of human life, it is pictured more or less in caricature, but still always recognisable. This view is at least more natural than if we regard the *Mino-game* merely as a creature of the fancy, like the dragon and *Hô-ô*, without recognition of this natural basis for its form and symbolical meaning.

The Japanese snakes (*Hebi*) have been recently made, by Dr. Hilgendorf, the subject of a minute investigation, and he has added two new species to the six known to Siebold. It is singular that the Japanese, while he turns away with disgust from the harmless snakes, entraps the poisonous *Trionocephalus Blomhoffi*, which he calls *Mamushi*, in order to skin it like an eel, cook it, and then

consume it as a nerve-strengthening food. The largest Japanese snake is *Elaphis virgata*, the awo-daishô of the Japanese, a grayish green snake, which not unfrequently grows to a length of 160 centimètres. Of another species, *E. quadrivirgata*, the Shima-hebi, *i.e.* striped snake, there is an almost black variety, the Karasu-hebi or raven-snake, which occurs in all the large islands. Several species of *Tropidonotus*, approaching in size, colouring, and mode of life, to our ordinary ringed snake, are particularly common in rice-fields.

Of lizards Japan can show three species: *Lacerta tachydromoides*, called Tokage, *Eumeces quinquelineatus* L., the Awo-tokage or blue-green lizard, and a small Gekko, *Platydictylus Yamori*. *Yamori*, *i.e.* house-warder, is the very characteristic name of this pretty little creature, which in southern Japan appears in the evening on the roofs and walls of the dwellings, like its relatives in India, in pursuit of insects, although it is much less often met with. Through the day it lives retired and concealed in dark crannies.

Our frogs and toads, which are distributed over so great a portion of the earth, we find also in Japan, *viz.* *Bufo vulgaris*, called Kike and Gama by the natives, *Rana esculenta*, Japan. Kawadzu or Kaëru, *R. temporaria* (Aka-gaëru, *i.e.* red Gaëru), *R. rugosa* (Tsutsi-gaëru), *Hyla arborea* (Ama-gaëru) and besides *H. Bürgeri*. On the other hand, we find some newts which are strange to us, and which deserve a somewhat more detailed notice. The first of these is the little Imori or spring-warder (*Triton subcristatus*) with its dark cinnabar-red belly, which is rarely wanting in any open spring, ditch, pond, or little basin in a garden. Quite different are the habits of the much larger San-shô-no-uwo,¹ or mountain-newt (*Onychodactylus japonicus* Schl., *Lacerta japonica* Thbg.), which grows to a length of 10-12 centimetres. It lies concealed during the day in moist shady places in the mountains, while by night and in rain it comes forth, and is then, particularly in the Hakone mountains, caught, boiled and dried. The creatures are strung on sharpened sticks, run through their heads, and sold in packets; they are used as a remedy for consumption, and worms in children. Two other species, *Ellipsoglossa nævia* and *E. nebulosa*, call for no special remark, while on the other hand the Giant Salamander (*Cryptobranchus japonicus* Hœv.), engages our special interest, in the first place because of its limited field of distribution and its mode of life, and in particular also because of its relations to living species found elsewhere, or to fossil species.

As von Siebold, the discoverer of this sluggish, clumsy and quiet creature, has already pointed out, it is confined to the mountain countries between 34° and 36° N. Lat. of the largest Japanese islands, though it does not live, as the same writer

¹ The word uwo, fish, is also applied to newt-like creatures.

further asserts, in volcanic regions and crater-lakes, nor at a height of 5,000 feet, but in the clear running mountain-streams of granite and schist-ranges, at a height of from 400 to 1,000 metres above the sea, feeding upon trout, the larvæ of insects and the smaller batrachians. Its principal habitats are :

1. The springing streams along the watershed which divides the coast-rivers running to the Sea of Ise (Ise-no-umi) from the basin of the Yodo-gawa debouching near Ōsaka (Lake Biwa and the Kitsu-gawa), particularly the streams running into the Kitsu-gawa from the small province of Iga.

2. The mountain-streams of the border mountains of Hida, especially towards Mino.

3. The streams on the watershed between San-in-dô and San-yô-dô in the provinces of Tamba, Iwami, and Mimasaka.

The Japanese name, Sancho-no-uwo, employed by Siebold, should not be applied to this creature, as this application rests upon a confusion with *Onychodactylus japonicus*. The Giant Salamander is called in Iga, Hazekoi ; in Mimasaka, Hanzaki ; in Iwami, Hanzake ; in Tamba, Hadakasu and Ango.

The creature is captured partly for the sake of its flesh, to which also medicinal effects are ascribed, partly to be employed in keeping the water clean in wells. The largest specimens however (as long as 160 centimetres) are brought to the chief towns of the country, Tôkiô, Kiôto and Ōsaka, where they are often to be found as curiosities in animal shops. The latter circumstances likewise prove that the "kingdom of the Giant Salamander," by no means embraces all Japan, but that the animal occurs somewhat rarely, and is known only to the few.

A near relative of the Hazekoi lives in China ; another is the *Salamandrops giganteus* of North America ; a third is the creature discovered in the Upper Miocene at Oeningen, by Scheuchzer, the *Andrias Scheuchzeri*, since so celebrated, which is the nearest of all to it.

Despite the pertinacity and length of life exhibited by this Japanese creature in aquaria, it seems very probable that in consequence of its weak reproduction and limited distribution, as well as of the persecutions to which it is more exposed than formerly, it will follow its departed cousin, the *Andrias Scheuchzeri*, the "homo diluvii testis" of the Oeninger strata, and at no distant period will cease to form part of the living Fauna of Japan.¹

E. FISHES.

With justice have old authors, as well as those of recent times, referred to the great importance of fish as the principal daily food

¹ Further details upon *Cryptobranchus* in Rein and Roretz : "Beitrag zur Kenntniss des Riesensalamanders." *Zoolog. Garten*, xvii. 2, 1876.

of the Japanese people, and also to the remarkable variety of kinds¹ which are brought to market in that country. The Chinese and Japanese waters appear to be richer in fish than any other parts of the ocean, indeed to be inexhaustible, when we see how hundreds of thousands of persons here devote themselves to fishery without producing any appreciable decrease in this extremely important source of nourishment, and when we consider that this state of things has continued for thousands of years.

As compared with the wealth of fish in the sea, the inland waters naturally appear very subordinate, but we must not therefore underrate their importance. Here also the considerable quantities of trout, carp, shad, eels, etc., caught year by year, seem to be completely replaced by a rapid increase, although we must indeed bear in mind that the pike, the great pirate of our rivers, and many other circumstances that with us hinder the propagation of fish, are there absent. I know of no cases in Japan in which the waters have been depopulated by depredations, or at all events been reduced to a few fish, as is so common in European rivers and within the great Baltic lake district, and yet in Japan there is no close time nor any other special protective arrangement.

As in the bird world, on the approach of the cold season many species leave their summer breeding places and migrate southward, while other northern forms succeed them and, during the winter, to a certain extent replace them, so it is with the fishes of Japan. Besides the permanent species, there are a great number of others which come and go with the monsoons and drift-currents of the ocean. Thus in summer a considerable part of the very numerous and varied fish-world of the Indian Ocean and Malayan Archipelago appears on the shores of Japan, especially the southern shores, which in winter would be vainly sought for there.² On the other hand there come, with the setting in of the northern monsoon, more plainly clad inhabitants of the Sea of Okhotsk, and by their great numbers and delicate flesh furnish a rich source of nourishment for many of the inhabitants, especially those on the more northern coasts. These facts must be carefully borne in mind by the ichthyologist; for if he were to present a picture of the Japanese piscifaua merely as it presents itself in one of the two extreme seasons of the year, it must necessarily prove miserably defective, and lead to erroneous conclusions.

The fish of Japan which have as yet been collected and described are mostly to be found in the British Museum, and in the Museums at Leyden and Berlin. Among the older naturalists who came into contact with Japan, Thunberg was the only one who devoted

¹ So far about 600 species have been described.

² Resting upon these facts, Sir John Richardson reached the conclusion, as early as 1845, that these tropical fishes must reach the shores of Japan with a warm current.

any great attention to the fish. Our knowledge of this class of creatures was also considerably increased at the beginning of this century by von Langsdorf, the member of the Krusenstern Expedition. The 358 species described in Siebold's "Fauna Japonica" were principally collected by Dr. Bürger in Nagasaki. It must be attributed to this circumstance that several more northerly families, such as that of the Salmonidæ, are only poorly and inadequately represented in that great work, and the prickly finned fishes in general predominate much more considerably than they do in reality. The reports of the Perry Expedition, which in most departments of natural science did but little to advance our knowledge of Japan, contain Brevoort's descriptions, and for the most part also coloured illustrations (unfortunately not from the originals) of 62 kinds of fishes, including a number that were previously unknown. The Fauna was further supplemented by Bleeker, then by the zoologist of the Prussian Expedition, Dr. E. von Martens, as well as recently by Dr. Hilgendorf, while Dr. Günther, the most distinguished living ichthyologist, with indomitable industry has succeeded, with the aid of others, chiefly English collectors, in ascertaining a considerable number of the new species of the Japanese Fauna.

The Sea of Japan has been called the kingdom of the Scomberoidæ (mackerel-tribe), and also the kingdom of the Cataphract. The two designations are indeed of unequal value; for while the former, as has already been pointed out, is well founded, this is by no means the case with the latter. Neither is the percentage of the Cataphracti in the entire number of Japanese piscine species, nor the number in which they are found, such that Japan holds a prominent position in regard to them. This we may ascertain, not only by considering the species hitherto made known and described, but especially if, like the author, we observe the fisheries carried on along the different coasts of the country and investigate the supplies brought to the fish-markets. In order to confirm these general observations, we may here add an enumeration and brief discussion of the most important genera and species which have up to the present been found in the Japanese waters.

I. ORDER. PRICKLY-FINNED FISHES (ACANTHOPTERYGII).

Berycidæ family. This beautifully formed and well-armed group extends in a few genera and species from the Mediterranean, through the Atlantic and Indian Oceans, to the Malay Archipelago and the Japanese coasts, where in particular *Monocentris japonicus* Hout., the Yebisu-dai (*i.e.* the bream dedicated to the God of the Market), or Matsu-kasa (fir-cone, so called from the large scales) attracts notice by its form. Several species of *Beryx* remind us of the Fauna of the East Atlantic islands, and four representatives of the genus *Holocentrum* of the squirrel-fish of the sea-coasts of East

and West India. The tooth-perch, *Myripristis japonicus*, is distinguished by its beautiful colours and a high degree of golden radiance, from which it has derived the name of Umi-kingiyo, Sea-goldfish, and Nishi-ki-dai, rainbow-bream.

Percidæ family, perch. In the fresh waters this numerous family has no representative, while the sea can show many noteworthy members of it, and as everywhere else, so too in the land of the rising sun, these well-shaped *Acanthopterygii* provide an agreeable and esteemed food. Among the species which are met with on every coast, and during the whole year, are especially the sea-perch, *Percalabrax japonicus* Schl., the Suzuki (Seigo, while young), and the Ara (*Niphon Spinosus* Schl.), which frequents the coast of Yezo in particular, as is indicated by its other name, Matsumaye-ara. The many-membered genus of the saw-perches (*Serranus*) which inhabits all tropical and subtropical seas, and is one of their handsomest inhabitants, is represented in Japan by 16 species. It bears the names Hata and Jime. Among the handsomest of them are the Aka-hata (red hata) and Tsimen-ara (*Chirimen-ara*, i.e. crape-ara). Four species of the Indian genus *DiaCOPE*, including *D. vitta* (*Okionbutsu* ?), several *Plectropomæ* (particularly *P. susuki*, now recognised as *Serranus fasciatus* Thbg.), moreover the beautifully tinted black perch, *Aulacocephalus Temminckii* (Hana-ara or flower-perch) and *C. hirundinaceus* (Nada-itoyori) only visit the coasts of Japan in summer with the Kuro-shiwo and warm drift-current. The same statement applies to various species of other genera, as *Apogon*, *Diplopion*, *Mesoprion*.

The family of the *Pristipomatidæ* also inhabits principally the tropical zone, and extends from there into the southern temperate regions. In Japan the more important genera are *Diagramma* and *Dentex*, and then *Therapon*, *Pristipoma*, *Scolopsis*, *Cæcio*. Of the genus *Dentex*, *D. Griseus* (Umi-dai) and the very beautiful *D. Setigerus* (Itoyori-dai) or thread-bream are common. Several species of *Diagramma* and *Therapon oxyrhynchus* (Japan. Shima-isaka) on the other hand are only found in summer and on the southern coasts.

The family of the *Mullets* (*Mullidæ*) is principally represented by the Indian genus *Upeneus*. More important, however, are the bream (*Sparoidæ*). Many of their number bear the name Tai¹ with special affixes. The Tai proper is a beautiful deep-red to brown-red gold-bream (*Chrysophris cardinalis* or *Pagrus cardinalis* Lac). As the Greeks and Romans highly prized the flesh of its relative, the Dorado (*Ch. aurata*) of the Mediterranean, so the Japanese consider the Tai one of their best fishes. In Chinese and Japanese waters it is widely distributed, from the Fokien Strait as far as to the coasts of Yezo and Saghalien. Several other related species are not far behind it. Of the chiefly Indian species

¹ Ebisu, the god of the fish-market, is pictured with a Tai under his arm.

of the genus *Lethrinus*, one *L. hæmatopterus* has been found on the coast of Japan. Two species of the *Cirrhitidæ* family come in here, namely, the Ishi-dai or stone-bream (*Cheilodactylus zonatus*) and Shima-dai or island-bream (*Ch. quadricornus* Gth.), and finally also the Kuro-dai or black-bream (*Chrysophrys hasta* Bl.).

Squamipennes family (rock-fish), Japan. Hatatate. This interesting group, consisting chiefly of small fishes, equally distinguished by their peculiar form and marking, and by deep and splendid colouring, are only carried out of their tropical home into somewhat higher latitudes by warm currents, and in particular from Indian and Malayan waters as far as the warmest shores of Japan. Species of the genera *Chætodon*, *Heniochus*, *Holacanthus*, *Platax*, *Pimlepterus*, *Histioporus* and *Scarodon*, which in winter we meet with only in the tropical waters just mentioned, during the summer play in their wonted fashion also about the rocks of Southern Japan, and exhibit their gay bands and spots, as well as their usually large, characteristically shaped and glittering fins. Although none of them can compare with the proud angel-fish of the West Indies (*Holacanthus ciliaris*) or the Emperor-fish (*H. imperator*) of the Indian Ocean, yet their near relative, the Hatatate-nori (*H. septentrionalis*), and the highly esteemed "Tafelvisch" of Dutch India (*Heniochus macrolepidopterus*), the Kohatatate of Japan, *Chætodon strigatus*, as well as *Scarodon fasciatus* and *S. punctatus*, also belong to the best representatives of the many-coloured, brilliant tropical piscifauna.

Cataphracti family, also that of the *Triglidae* (grunters). As the vernacular names grunter, sea-cuckoo, "Panzerhahn," flying-cock, dragon's head, head-fish, pitchet-fish, sea-devil, etc., refer partly to the habit of these creatures, when removed from the water, of extending their great breast-fins and producing grunting sounds, partly to their disproportionately large heads and their generally ugly figure, so we find other nations also giving expression to these characteristics. Thus the Japanese calls, e.g., *Pelor japonicum* C. and V. *Oni-o-koze*, i.e. devil-like. Only in a few genera do the *Cataphracti* approximate to normal piscine figures, as especially in the case of *Sebastes*. The similarity of one very well known species (*S. marmoratus* C. and V.) to the saw-perches is indicated by the Japanese in the designation *ara-kaba*. The Japanese seas harbour species of the following genera: *Chirus*, *Agrammus*, *Sebastes*, *Scorpena*, *Synanceia*, *Pterois*, *Apistus*, *Tetraroge*, *Haploactes*, *Minous*, *Pelor*, *Platycephalus*, *Trigla*, *Dactylopterus*, and *Cottus*. *Platycephalus guttatus*, called *Kochi*, is, with the *Gobionidæ*, caught principally at the mouths of rivers.

The *Trachinidæ* (Dragon fish) family is represented by the genera *Uranoscopus*, *Percis*, *Sillago* and *Latilus*, and that of the *Shadow* or *Umber-fishes* (graylings) by *Sciaena*, *Corvina*, *Pogonias*, and *Otolithus*.

Of the small tropical group of *Polynemidæ*, or finger-fishes,

Japan possesses the *P. plebejus* of the Malay Archipelago, called Hirano akinasi, and of *Sphyrænidæ* (sea-pike), Japan. Kamasu, several species, which are found in large numbers, especially in the spring after the change of monsoons. At the same time also, a dagger-fish (*Trichiurus japonicus* Schl.), Tatsu or Tatsi-uwo, appears in large numbers.

The *Scomberoidæ*, or mackerel family, as we have already pointed out, play a very prominent part in the marine Fauna of the Japanese islands, and the economy of their inhabitants. We meet with these easily recognised piscine forms in the markets all over the country, and through the largest part of the year, in about forty species. Though it is chiefly in the summer months that the giants of the family, species of *Thynnus*, *Cybium*, *Seriola* and *Coryphæna* are caught, yet several small species of the genera *Scomber*, *Elacate*, *Stromateus* and small *Seriolæ* are found, principally in autumn and in the north. Some of them, especially the Saba (*Scomber pneumatophorus japonicus* Schl.), follow the shoals of herrings, in which they find their favourite food, and fall with them into the fishermen's nets. Others, such as *Elacate bivittata*, *Seriola purpurascens* (Akabana) and *Stromateus punctatissimus* (Manakatsuwo), in autumn disport also in shoals of their own, about the mouths of the northern rivers, and are there, especially in Yezo, caught in quantities, and after being salted are exported even to China. The great tunny fishes and bonitos (*Thynnus*), *Cybium* and *Seriola*, many of which weigh over a hundred pounds, are as a rule caught with the hook and line, and their flesh is cut up into pieces of uniform size, which are strung upon cord, dried in the sun, and then exposed for sale in every town, although they are sometimes also consumed while fresh. Most conspicuous of them is the common bonito or Katsu-uwo (*Thynnus pelamys*), one of the most important and most valued fishes of Japan. Much more numerous than in the West Indies and the Gulf Stream, this great pirate and formidable enemy of the flying fishes and of many other of the weaker animals living at the surface of the sea, follows the Kuroshiwo along the shores of Japan. Noteworthy for their size, or their frequent occurrence, are also the Maguro (*Th. thunnica* C.V.), the Sawara (*Cybium Chinense*), the Nagotsi (*C. niphonium*), the esteemed Hirasu (*Seriola aureovi* Hata), the Oiwo (*S. quinqueradiata*), and the Shiira (*Coryphæna japonica*). The genus *Caranx* (Japan. Aji) is abundantly represented, the commonest examples being the Hira-aji (*C. trachurus*), the Kansaja (*C. ciliaris*) and the Hiiraji (*C. equula*). All these bastard mackerel appear principally in summer, as well as the small and very striking *Blepharis indicus*.

Of the nearly allied *Xiphiidæ*, or sword-fishes, the *Trichiurus*, called Tatsi-uwo (Dagger-fish), is a very frequent visitor. Here belongs also *Histiophorus orientalis*.

Of the family of the Gobies (*Gobiidæ*) there occur, on the coasts as well as in the rivers and their mouths, a considerable number of

species of the genera *Gobius*, *Sicydium*, *Amblyopus*, *Periophthalmus*, *Boleophthalmus*, *Eleotris* and *Callionymus*. Amongst them those most frequently found inhabiting fresh waters are the Haze (*Gobius virgo*) and the Dabo-haze (*Periophthalmus modestus*), and more at the mouths of rivers the Ki-haze (*G. flavimanus*), the Kuro-haze (*G. brunneus*) and the Kawa-motsiguro (*Sicydium obscurum*).

Of the curiously and hideously shaped Frog-fishes (*Pediculati*), the Anko (*Lophius setigerus*) is found very frequently and in all parts of the sea about Japan; more rarely, and principally during winter, the Hari-anko (*Halieutæa stellata*), besides several species of the genus, also common in the West Indies, of the Anglers (*Chironectes*), whose flesh is considered actually poisonous. Also of the nearly allied Blennies (*Blenniidae*) several species are frequently found, especially *Centronotus* (*Gunellus*) *nebulosus*, the Gimpo and *Gunellus dolichogaster*, the Blenny so widely distributed over the Northern Pacific, and several others.

Of the genus *Amphacanthus* of the Indian Ocean, the Japanese waters can show several species throughout the year, and *Prionurus scalprum* (Japan. Niza) of the *Acantharidae* family is also to be observed, even in winter, in the fish markets, as an inferior article. *Atherina Bleekerii* Gthr. is nearly related to the mullets (*Mugilidae*), which are represented in fresh waters by the Bora or Ina (*Mugil japonicus* Schl.), which occurs, in particular, in nearly all the larger lakes. Also the esteemed band-fishes (*Cepolidæ*) are represented, especially in summer, chiefly by the Sakeno-uwo (*C. Krusensterii*).

Of the Pipe-fishes (*Fistulariidae*) one species, the Yagara (*Fistularia sewata* C.) is found not unfrequently. To visitors to Enoshima, e.g., it is offered dried, together with *Ostracion*, *Monacanthus* and other sea creatures.

II. ORDER. PHARYNGNONATHI.

Of the *Pomacentridæ* family several species are found, but still more interesting is the occurrence of various members of the wrasses (*Labridæ*), in particular of the Julis and parrot-fishes (*Scarus*), which in their gay colours remind us vividly of the tropical home of their congeners, although in Japan they are still found in late autumn. Here belong *Julis pæcilopterus* (Kusabi, grass fish) and several others; further, *Chærops japonicus* (Kandai), *Labrichthys rubiginosus* (Bera), *Crenilabrus flagellifer*, then the highly-esteemed Nobuzu (*Labrus reticulatus*) and Shima-nobuzu (*Labrus japonicus*), Inokô (*Scarus ovifrons*), Oganu (*Callyodon japonicus*) and several others.

III. ORDER. ANACANTHINI; AIR-BLADDER WITHOUT PNEUMATIC DUCT.

Of the very important family of the haddocks (*Gadidæ*), which is distributed over the entire Palæoarctic region, as yet only a few subordinate members have been reported from Japan, in particular the rockling (*Motella pacifica*) and the Umi-itatsi, *i.e.* sea-weasel (*Lotella phycis*). Some years ago, however, Dr. Hilgendorf proved that a genuine haddock also, the Tara (*Gadus Brandtii* Hilg.), frequents Japanese waters, and is sent in quantities in a salted state from the island of Yezo to the southern towns. And I can add from my own observation that, soon after the setting in of the northern monsoons, this fish also appears on the more southerly shores of the Sea of Japan.

Passing over the snake-fishes (*Ophidiidæ*) and grenadier-fishes (*Macruridæ*), which are also represented, we come in systematic order to the plaice (*Pleuronectidæ*), which, in the Japanese, as in the European fish markets, play an important part by virtue of their esteemed flesh and frequent occurrence. To the well-known genera of the colder seas are added here the forms *Plagusia* and *Achirus* of the Indian Ocean. Although most of them are found throughout the year, yet they are principally caught during its colder portion. Prominent among them are the Korei or flounder, particularly *Platessa asperima*, also the star-flounder or Hoshigarei (*P. variegata*), and the Taiwan-garei (*Pleuronectus scutifer* Steind.), also called Ishi-garei (turbot). The soles (*solea*) and *Plagusia japonica*, are called collectively Shita, soles; thus *Solea zebrina*, or Ushino-shita, Oxen-soles, as the *Synaptura ommatura* Rich., while *Hippoglossus olivaceus* is designated Ma-garei.

IV. ORDER. PHYSOSTOMI; AIR-BLADDER IN THE PNEUMATIC DUET.

The family of the *Siluridæ* (shad) is principally represented in the fresh water of Japan by the Namadzu (*Silurus japonicus*), a very widely spread and much esteemed species, which is found particularly in lakes, ponds, and paddy-fields. More uncommon is *Liobagrus Reinii* Hilg., a second closely related species, which I found in the south. Here the larger rivers shelter also the little Gigi or Gigi-jô (*Bagrus aurantiacus*), while on the other hand a striped shad, the Miko-uwo (*Plotosus lineatus*), and its near relatives inhabit the sea.

More remarkable in connection with Japan than the previous family are the salmon tribe (*Salmonidæ*), with which the Dutch ichthyologists at Nagasaki were so little acquainted, that Siebold's *Fauna Japonica* has led many to the erroneous conclusion that this characteristic northern group of highly prized fishes is but feebly represented in Japan. More light was thrown upon the subject

only by the Perry expedition and Brevoort's treatise on the salmon from the waters of Yezo. According to the latest and more thorough investigation of the subject by Dr. Hilgendorf,¹ Japan possesses at least ten species of this family, among which a few are confined to the rivers, and one only to the sea. This latter is the Shira-uwo, or white-fish (*Salanx microdon* Blkr.), a tiny transparent fish, which assumes an opaque white tint after its death. It is caught in quantities on the Japanese coasts, and, especially in spring, in Suruga Bay. The most widely spread species of salmon in the Japanese rivers and lakes, and the commonest freshwater fish, a creature found from Formosa to the Kuriles, is the Ayu (pronounce Ai), or *Plecoglossus altivelis* Schl. The Ayu is not found near the sources of the rivers, leaving these, *i.e.* the mountain streams, rather to a distant relative, the Ameno-uwo, *i.e.* rain-fish, which Hilgendorf regards as young specimens of *Salmo Perryi* Hilgd., while I consider them a peculiar species, a specifically Japanese mountain-trout, which never loses itself in the lower course of the river, and *inter alia* is characterized by three rows of vermilion points, the middle row of which runs along the *Linea lateralis*, reminding us of our ordinary trout. Different from this is the *Salmo pluvius* Hilgd., a salmon species, the young of which are also found in the mountain streams of Japan, under the name "Iwana," though much less commonly than the Ameno-uwo, and without its beautiful spots and markings. The proper Japanese salmon, which in autumn ascend in enormous numbers from the sea into the lower rivers of the more northern coasts, especially of the Island of Yezo, and here afford occupation and food to thousands of men, are *Oncorhynchus Haberi* Hilgd., the Shake, with the Masu (*Oncorhynchus Perryi* Brevoort). Hilgendorf further mentions the Kiuriuwo (*Osmerus eperlanus* L.), a kind of smelt, and also the Chika (*Hypomesus olidus* Pall.).

As frequently occurring *Scombresocidæ*, may be mentioned the Kuddera (*Belone gigantea*) and the Saira (*B. gracilis*), further the esteemed Sayori (*Hemiramphus sayori* Schl.) and one or several species of flying-fish (*Exocætus*), by the natives designated Tobino-uwo, *i.e.* kite-fish. While the members of this family, like the large *Scomberoideæ*, their bitterest foes, love a free life on the surface of the open sea, by way of contrast with them we find in the two following families almost exclusively inhabitants of fresh waters, some genera of which prefer muddy ditches and ponds. The *Cyprinodontidæ* are represented by the Metaka (*Hoplochilus latipes*), the true carps (*Cyprinoidæ*) by a whole series of genera and species, among which the most conspicuous in size and importance are the Carp or Koi (*Cyprinus carpio* L.), and the Japanese Crucian or Funa (*C. Langsdorffii* Schl., *Carassius auratus* L.). They are

¹ Hilgendorf, Japanische lachsartige Fische: Mittheil. der deutschen Gesellschaft, etc. 11. Heft, 1876.

found in almost all lakes and ponds, as well as in the larger rivers and irrigation-trenches, and are caught, as with us, in a variety of ways. Compared with them, several other species, which the Fauna Japonica enumerates, are of subordinate importance, as also a small species of barbel, which I recognised and added to the genus in virtue of its pharyngeal teeth. It is found, under the name *Ida*, in the rivers of Tosa in Shikoku. Gold-fish are to be seen very frequently in the ponds in connection with temples, and elsewhere. The Japanese breed two species; the common gold carp, which they call *Higoi*, and a fish of an essentially different figure, the *Kingio* (Gold fish, *Carassus auratus*), which is principally distinguished by a peculiar trifurcation of the long anal fins, viz., that besides the perpendicular steering-fin there are two equally long but more horizontally situated side-fins. The *Kingio* is on the whole more sensitive and rarer than the *Higoi*, though sometimes, as in the gold-fish farm near Yokohama, it is found in great numbers.

Most of the smaller freshwater fishes of Japan, species of Günther's genera *Pseudogobio*, *Pseudorasbora*, *Achilognathus*, *Pseudoperilamprus*, *Opsariichthys*, *Misgurnus* and *Botia*, relatives accordingly of our gudgeon, loaches, and bleaks, are found also in China and Formosa. Among the bearded loaches the *Dojo* (*Misgurnus rubripennis* Schl.) is very common in the muddy ditches, and the *Tanago* (*Achilognathus* or *Leuciscus lanceolatus*), as well as the *Ugui* (*Leuciscus Hakonensis* G.), are frequently found.

The herring family (*Clupeaceæ*) appear, in accordance with their habits elsewhere, principally in winter and on the northern coasts of the Japanese islands and that in great abundance of species and individuals; yet the various kinds which are salted and cured, and are thus so valuable to Europe, are still little known, and the great mass of them are caught for the train oil, and to be used as manure. Here belongs especially the *Iwashi* or *Maiwashi* (*Clupea melanosticta* and *Cl. gracilis*), whose approach is often heralded by flocks of sea-gulls, and which, especially in autumn, is caught, together with its persecutor, *Saba* (*Scomber pneumatophorus japonicus* Schl.), in great quantities on the coast of Yezo and North Hondo. This applies also to the *Nishin* (*Clupea harengus* L.) and several others. The *Isaza* (*Engraulis japonicus* Schl.) too is caught in quantities during the cold season. Of the larger species the *Konoshiro* (*Chatoëssus punctatus* Schl.) is in winter seen a good deal in the markets. It is little valued, and is chiefly eaten by the poorer classes.

Among the eel kinds (*Murænidae*) the *Unagi* (*Anguilla japonica* Schl.) must be particularly mentioned, which occurs commonly in all the fresh waters of Japan, despite the large numbers which are caught every year. Among the larger sea-dwellers of the family must be mentioned the *Hamo* (*Conger bagio* Cant.) which is said to measure over three metres, and to weigh fifty pounds, the *Anago* (*Congromuræna anago* Schl.) and the *Kidako* (*Muræna variegata* Richs.).

V. ORDER. LOPHOBRANCHII.

Pipe-fishes and sea-horses, *Syngnathus* and *Hippocampus* (Kaiba), the best-known representatives of this peculiar unimportant group of sea dwellers, occur in Japanese waters in some six species.

VI. ORDER. PLECTOGNATHI.

Of the family of the *Sclerodermi*, we meet with, in summer principally, several species of coffer-fish (Hako-uwo), as *Ostracion immaculatus* and *O. brevicornis*, which, especially while young, often find their way into the fisherman's net. Also *Balistes*, *Monacanthus*, and *Triacanthus*, frequently appear on the shores of Japan with the south-west monsoon. Their near relatives, the globularly inflated *Gymnodontes*, are much richer in species, some of which are also found in winter, especially members of the genus *Tetrodon* (Fugu). Several species of it, particularly *T. rubripes* Schl. and *T. xanthopterus*, generally called Fugu by the Japanese, are considered poisonous, as is mentioned even by Kaempfer. Severe punishments are said formerly to have prevented the selling and eating of these fishes, and rightly, for only a few years ago Dr. Görtz, of Yokohama, showed that in three cases, within his own knowledge and under his care, serious illness, marked by headache and nausea, paleness, heavy perspiration and strikingly diminished activity of the heart, had followed the consumption of the Fugu, especially of its roe.¹ Besides the genus mentioned, the family shows also several other species of *Diodon*, as well as the great moon-fish (*Orthogoriscus* sp.), called by the Japanese Ukiki; though it is also called Funrei, e.g. on the coast of Tôtômi and Suruga, where it is often caught of a length of $1\frac{1}{2}$ metres, and over 1 metre broad.

VII. ORDER. GANOIDEI.

Of the two families of this tribe, only that of the sturgeon (*Acipenseridae*) is represented in the Japanese seas, in two species of comparatively rare occurrence.

VIII. ORDER. CHONDROPTERYGII.

(a) Sea-dragons (*Chimeridae*). Of this small group of shark-like fishes we meet in Japanese markets with the widely distributed *Chimæra monstrosa*, which the natives call Gin-same (silver-shark). (b) The sharks proper (*Squalini*) have the Japanese names Same and Fuka, and are represented by various well-known and widely distributed genera, the smaller species of dog-

¹ "Ueber in Japan vorkommende Fisch- und Lackvergiftungen," von Dr. A. Görtz: Mittheilungen d. deutschen Gesellschaft, 8 Heft, Yokohama, 1875.

fishes (*Scilliidae*), Japan. Tora (tiger), are found, as sometimes in Europe, a good deal in the fish markets, yet, as compared with other fish, play a subordinate part. Especially noteworthy moreover is a snout shark, Nekosame (*Cestracion Phillippi* Bl.), which as one of the few living representatives of an almost entirely extinct family of sharks, living in the tertiary period, is found distributed from New Zealand to the waters of Japan. Also the family of the *Rhinobatidæ*, Japanese Ken-same or Kemei is represented by several species.

Rays (*Rajacei*), Japan. Yei, are likewise found frequently and in various species in the fish markets, and not only the rays proper or Keno-yei, but also the Aka-yei (red or sting-ray), Shibirei (electric ray), and other genera.

IX. ORDER. CYCLOSTOMI.

The genus *Petromyzon* or nine-eyes. This eel-shaped, unimportant section of fishes is represented by a near relative of our native species, *Petromyzon japonicus* Martens, which lives in river mouths, and is known to the Japanese under the name Yatsume-unagi, *i.e.* eight-eyed eel.

F. INSECTS AND SPIDERS.

Insects (*Mushi*) are, as has already been mentioned, abundantly represented. In their case also the relationship to the inhabitants of the neighbouring continent is great, and the general character of the particular classes thoroughly corresponds with that of the northern temperate section of the Old World. A considerable number of species, as is the case with mammals and birds, have spread themselves from the Atlantic to the Pacific Ocean, and are found in the Empire of Nippon just as well as in the British Isles. Others, as we follow their distribution towards the east, we see finally disappear, in order to give place to nearly related species. But to this, as we may call it, modified insect fauna of the temperate West of Europe, there are added also a series of tropical forms, which are equally striking in figure, colour, and mode of life, as *e.g.* the species of the genera *Papilio* and *Mantis*.

Several classes are still awaiting a more complete examination. The beetles and butterflies are best known. Glowing with the most various colours, the leaf-beetles especially appear in many species, and in great numbers,¹ in particular the *Melolonthidæ* and *Cetoniidæ*, to which the native name for beetles, *viz.* Kogane-

¹ Among 152 species of beetles which I collected in my travels, and handed to my friend, Dr. L. von Heyden, in Frankfurt, to name, he found the single genus *Anomala* represented by ten species.

mushi (gold insect) is particularly appropriate. The *Chrysochroa fulgidissima* is, as the name indicates, probably the most beautiful beetle of the Japanese Archipelago. In the bright sunshine of the hottest season of the year it swarms about the tops of the Keaki (*Zelkova Keaki*) and Yenoki (*Celtis sinensis*), and probably too of other trees of the *Ulmaceæ* family, upon whose wood its larvæ feed, and is, although common, yet difficult to capture. The Japanese call it Tama-mushi, the precious-stone insect. Among the ground-beetles the genus *Damaster* in particular furnishes five elsewhere rare and coveted species. In Japan several of them are pretty common, as *D. blaptoides* in Kiushiu, *D. pandarus* near Yokohama, *D. Fortunei* in North Japan.

A striking species of nasicornous beetle, reminding us of the giants of the tropics, is *Xylotrupes dichotomus* L., which appears to be distributed over the entire monsoon district.

Among the goat-beetles I was particularly struck by *Melanauster chinensis* var. *macularia*, which has been known to us from China for a hundred years. It is fond of the banks of streams, where it is generally found on the bushes of maple, willow and styrax japonicum. It is distinguished by a brilliant black colour, like a coat of lacquer, as well as numerous white points. Various species of *Lampyris*, Japan. Hotaru, are caught in the height of summer, and put in separate cages, in order to take advantage of their light.¹

Of the butterflies (*Chô-chô*) we are particularly struck, as has already been intimated, by the broad-winged kind (*Papilio*), which give the Fauna a tropical colouring. We find represented here no less than nine or ten species of this stately tribe, and several of them are extremely common. Among them *Papilio macilentus* Janson is peculiar to the country. Besides these are several others which particularly impress us, by their dark colour, by their size and lazy flight, as *P. Dehaani* Feb., *P. helenus* L., *P. Maakii* Brewer, *P. demetrius* Cramer, *P. alcinous* Klug. The caterpillars of several of these species are very like each other, and often live together on the leaves of the Kara-tachi (*Citrus trifolia*), and of the Inu-san-sen (*Xanthoxylon schinnifolium*). *Papilio Hippocrates* is hardly distinguishable from our swallow-tail.

Besides these and other striking forms we find among the day-butterflies many old acquaintances, such as the black-veined white (*Pontia cratægi*), the white admiral (*Limenitis Sibylla*), the peacock (*Vanessa jo*), the small tortoiseshell (*Vanessa urticæ*), the cosmopolitan painted lady (*Vanessa cardui*), the silver-washed fritillary (*Argynnis paphia*), and a series of others.

¹ Entomologists, who have gone more deeply into the study of Japanese insects, will be able to make considerable additions to my brief remarks on this class of creatures, upon points which have escaped my observation, for unfortunately in this field I am, as a favourite Japanese saying has it, "I no naka no kawatsu no gotoku," like the frog in the well.

The Sphingidæ, such as *Triptogo rosipennis*, *T. complacens*, *Acherontia medusa*, the Japanese Death's head and others, also remind us of our species. But the European character appears still more sharply in the case of the moths. According to Butler, they are almost without exception identical or nearly connected with Chinese species. We are already acquainted with over 100 species which are found also in England. Particularly noticeable is *Pterodecta gloriosa*, a peculiar butterfly-hawkmoth, which flies by day and erects its wings as it sits, like the diurnal lepidoptera. From its favourite resting-place, to which it constantly returns like a *Thecla*, it gives chase to every passing insect.¹

Japan has seven large silk-moths, viz., *Trophæa Artemis* Butl. and *aliena*, *Samia*, *Cynthia*, *Caligula Jonasii* Butl., *C. japonica* Butl., *Rhodia fugax* Butl., *Antheræa Yama-mai* Guérin. *Brahmæa japonica* is another very large and beautiful *Bombyx*. An extraordinarily common and remarkable species is *Caligula japonica* Butl. The Japanese call it *Genjiki-mushi*. Like the edible chestnut upon whose leaves it feeds by preference and to whose catkins its full-grown caterpillar has a great similarity, it appears to be distributed over the whole country. I sometimes saw isolated trees eaten quite bare by the caterpillars of the *Genjiki-mushi*. Their cocoons are employed in the manufacture of fishing-lines.²

Only two spinners are employed in silk producing: *Bombyx mori* and *Antheræa Yama-mai*.

Among the Hymenoptera, the wasps, bees and hornets bear the name *Hachi*, while ants are called *Ari*. Bees are kept but on a very limited scale and with little attention. Silkworm breeding is exposed to the ravages of a dipterous insect, whose larvæ are called *Udshi-muchi*. Peculiarly valuable galls are produced here, as in China, by a species of *Cynips* upon the leaves of *Rhus semialata*.

With respect to Diptera the most obvious remark is, that gadflies (*Abu*) in the open air and flies (*Hai*) in the houses are generally speaking less numerous and less troublesome than with us. Only in the rooms where silkworm breeding is carried on, and near them as in cattle stalls in Europe, flies are found in great numbers and are a nuisance. Without the protection of a net, hungry, blood-thirsty mosquitos (*Ka*) may disturb sleep in the hot season, but they are by no means so common as we might have expected considering the quantity of water in the rice-marshes, and that they are found elsewhere in much drier districts. Moreover, mountain places lying at a height of from 600-800 metres, and having cool nights, are entirely free from gnats. The same thing cannot be said of the

¹ For this and some other observations I am particularly indebted to Mr. H. Pryer, of Yokohama, who is the best authority on this class of creatures in Japan.

² Further details as to this insect may be found in an article by Hilgendorf, in the 9th Heft of the *Mittheilungen der deutschen Gesellschaft*.

fleas (Nomi), of whose numbers and importunities in many an inn, travellers have repeatedly complained. Of the plagues of the bed-chamber, on the other hand, the bug, that most repugnant and troublesome sharer of human habitations, is wanting not only in Japan, but apparently in the whole of Eastern Asia, a very striking circumstance, considering the large amount of intercourse with Europe and North America.

Japan is a true Eldorado to the neuroptera fancier. The abundance of water in the rice-fields appears essentially to promote the development of the larvæ of the dragon-flies (Tombô), as well as of those of the Ephemera. A kind of dragon-fly larva, called Magotaro-mushi (Magotaro's insect), is celebrated throughout Japan, and is employed as a remedy against the diseases of children. It is caught in a small brook near Saigawa, on the Ôshiu-kaidô, between Fukushima and Shiroishi.

Termites, the existence of which in Japan had already been mentioned by Kaempfer, have lately been found by several naturalists.

Orthoptera are also rich in species, particularly grasshoppers (Batta). They are also sometimes kept in cages, especially the green locusts. In some districts of the interior, grasshopper larvæ (Inago), particularly those of the Acridiæ, are fried in oil, and in the absence of fish, serve as a relish to rice, though they form a very inadequate substitute, as I can testify from my own experience.

Several species of Mantis (Kama-kiri-mushi) are common, but attract little attention on account of their quiet mode of life, and their occurring frequently upon plants of the same colour as themselves. Crickets (Kôrogi) and cock-roaches (Abura-mushi, *i.e.* oil insects) succeed all the more in attracting notice. This is still more true of a class of the Cicadidæ, the cicadas (Hemi), of which at least six species are found, which even the native distinguishes by special names. About the middle of May their ear-splitting noise begins and is continued into September. Like the grasshoppers, they are here, as everywhere, lovers of the warm sunshine, and are liveliest when the sun is exerting its full force, and when the song of the birds is hushed by it. Kaempfer says of them: "The mountains and bushes are filled with their noise, which strikes the ear shrilly from a great distance." He distinguishes three species, which he illustrates, together with their larvæ, and of which he correctly observes that their peculiar rattling and grating do not fall altogether in the same time of the day and year, but that they are rather to some extent distributed over it.

Of field and tree-bugs there is no lack, although, as we have previously remarked, the bed-bug has hitherto spared the country. There are no poisonous scorpions or scolopenders to be found. Spiders (Kumo) are numerously represented, but are still in need of further investigation, as is also the case with the Coccina.

G. CRUSTACEA.

Von Siebold and other students in the Dutch colony at Deshima devoted much attention to the crustacea of Japan, and the materials accumulated by them were excellently handled and arranged by W. de Haan. The long list of the species, many of them very interesting, which were thus made known, has been essentially increased and extended by later discoveries.

By Kani (gani) is generally understood in Japan a crab; by Yebi (ebi) the crawfishes proper or *Macrura*.

The river crayfish (*Astacus japonicus*) appears to be confined to Yezo; for when Kaempfer and others mention its occurrence in Old Japan, this rests, as von Martens has pointed out, upon a confusion with various sea-crabs. On the other hand, the fresh waters of the Japanese Islands exhibit at least half a dozen species, some of which are very common. These freshwater crabs are as different in their habits from the land-crabs as from the coast-crabs of tropical countries, inasmuch as, in the first place, the latter only leave their lurking places—holes dug out by themselves in the clay soil or in the sand of the dunes—by night to seek their food, and, in the next place, both classes avoid fresh water, but occasionally seek the sea, if only for the purpose of depositing their spawn there. The Japanese freshwater crab, on the other hand, dwells as a rule, like the river crayfish, in holes on the shore, and for the most part above the water mark, and, like the snails, often comes out from its hiding place even in the daytime, especially during rain, to play merrily about with its fellows and sometimes to undertake extended excursions. Thus we often find a small species (*Sesarma hæmatochir* Haan) in the mountains, so that its Japanese name, Yama-gani, mountain crab, is quite appropriate. Even *S. quadrata* Haan often goes far away from the water, while various *Telphusæ*, such as *Telphusa Berardi*, which represents the *T. fluviatilis* of the Mediterranean countries, prefer the wet rice-fields. A much larger species is said to occur only in the Katsura-gawa to the west of Kiôto, and appears not yet to have been described. Moreover shrimps, *Palæmon* (*Kawa-yebi*), and even *Amphipoda*, such as *Gammarus*, and further *Armadillo* and *Sphæroma*, are found in the rivers and paddy-fields. Yet here also the chief home of the crustaceans is the sea. With the south-west monsoon and tropical fishes, but also in company with herrings and mackerel, there appear whole flocks of *Lupa*, and other swimming crabs, which perform the duty of a sanitary police among the sick and dead fish, as is done by other genera on the coast and at the bottom of the sea.

Not a few of these marine crustaceans are very widely distributed. Thus, according to Milne Edwards, the following Japanese species occur also in Australian waters:—*Cancer integerrimus*, *C. Ocyrhoë*, *Lupa pelagica*, *L. Tranquebarica*, *L. sanguinolenta*, *Tha-*

lamita crucifera, *T. truncata*, *T. prymna*, *Podophthalmus vigil*, *Calappa lophus*, although these are far from exhausting the list. Moreover an arrow-tail, Japan. Kabuto-gani, *i.e.* helm-crab (*Limulus longispina* Hoeben), which is often caught especially in Seto-uchi, belongs to these tropical forms. *Macrocheirus Kämpferi* Sbd. has the same area of distribution from Japan through the Malay Archipelago, the giant among the sea-spiders, which the Japanese rightly call Taka-ashi (long legs) for the legs of the male are $1\frac{1}{2}$ metres long. The names Ibara-gani (thorn crab), and Yado-kari (house hirer), for *Lithodes hystrix* and *Paguræ* are also very aptly chosen.

As the river crayfish is wanting inland, so the lobster is wanting on the coasts of Japan proper. In its stead appear, as elsewhere in warmer seas, various kinds of *Palinurus* and *Scyllarus*. The largest and most important of them is probably *Palinurus Burgeri*, which finds its way to market in great numbers under the names Umi-yebi (sea crab), and Ise-yebi (crab from the province of Ise).

Of Cirrhipeds, *Lepas* and *Balanus* are of course not wanting; a *Pollicipes* also occurs, which von Martens found near Mogi in Kiushiu, and the author on the coast of Enoshima.

In the 41st volume of the Memoirs of the Imperial Academy (of Vienna), Dr. E. von Marenzeller describes 30 species of Annelidæ from Japan which have been collected in the last few years by his two countrymen, Dr. von Drasche and Dr. von Roretz. Here also then is established a combination of specifically tropical and northern forms. Twenty-four of the species described were new. Otherwise the worms of Japan have had but little attention.

H. MOLLUSCA.

For a long time the list of 90 species of marine molluscs which Thunberg gave, in the year 1793, in the 4th volume of his *Resa*, pp. 98, 99, comprised all that was known of this portion of the animal world of Japan. Although later indeed many other species were sent from Deshima to enrich the collections of Holland, it was reserved for the conchologists of the last twenty years to investigate this department more thoroughly. By collectors such as Dr. Stimpson, Nuhn, Adams, Schrenk, Boeddinghaus, von Martens, Hilgendorf, the Author, and others, the materials accumulated have been essentially increased, while the land and freshwater fauna has been more thoroughly investigated, principally by those last named.

The most important works upon the molluscs of Japan have been written by Adams, Crosse, Dunker, Gould, Kobelt, Lischke, von Martens, and von Schrenk. Dunker gives in his first *Fauna* 128 species of marine conchylia. In the work of Lischke we find 327 species described and partly illustrated, while the very recent

work of Dunker on this subject enumerates and critically discusses nearly 1,200 species ascertained up to the latest moment.¹ That the wealth of forms is far, however, from being as yet exhausted, and that later comers may still gather a considerable harvest, is shown by the circumstance that even the fish markets of Kago-shima and Tôkio, to which only the easily caught and larger creatures and those occurring in considerable numbers find their way, furnished but a few years ago two hitherto undescribed species.

The view expressed by von Martens with regard to the land and freshwater molluscs, that like the freshwater fishes they are essentially connected with those of the Eastern Asiatic coast-countries, has only received a further confirmation by the new discoveries of Hilgendorf and of myself. The number of tropical and Indian forms is small, compared with the species pointing towards China and Siberia. According to Kobelt² 193 species are now known. The predominance of the groups *Camena*, *Fruticicola* and *Plectotropis*, under the genus *Helix*, is characteristic, as also the abundance of species in which the *Clausilia* occur, the appearance of numerous *Paludina*, *Cyrenæ* and *Dipsas* in fresh waters, chiefly in so far as these are associated with rice-culture, as well as of the *Melania*, which also abound in the wet rice-fields. Among the 57 species of *Helix* (*Maimaitsuburi*, *i.e.* wandering head), the very common *H. quæsitæ* always coils from right to left, and, with the very variable *H. peliomphala* Pfr., is the most wide-spread species. Of 34 species of *Clausilia* (*Kiseragai*, pipe-snails, because they have the shape of Japanese pipes), *Cl. Martensi* Herklots (48 mm.), and *Cl. Yokohamensis* Crosse (44 mm.) are the giants of their kind. The last named species is common, especially in Southern Japan, where old, decayed trunks of evergreen oak often serve as its habitat. Thus I found it especially numerous in a forest of *Quercus cuspidata* near Kajiwarra on the Tosa side of the Sasagamine-tôge in Shikoku. Of Bivalves I found the *Margaritana Dahurica* Middend. (called Fankai), hitherto only known on the Asiatic continent, in quantities at the outlet of Inawashiro Lake in Aidzu. The large *Anodontes* (*numa-gai*,³ pond-mussels, *Karasu-gai*, raven-mussels), as *A. Woodiana*, *A. lauta*, *A. japonica*, recall our native species, and also various species of *Unio* (*Nagata-gai*, long mussel, *Kamisoro-gai*, razor-mussel); *Dipsas plicata* (*Hire-gai*) resembles in some degree our *Unio batavus*; while the genus *Corbicula* (*Shishimi*), which appears in no less than nine species, has its living relatives in the subtropical belt of the northern hemisphere, the others in our tertiary strata.

¹ This important work on the marine conchylia of Japan has recently been published by Fischer, in Cassel, under the title: *Index Molluscorum Maris Japonici*: 1882.

² *Fauna molluscorum extramarinorum Japoniæ*. Abhandlg. der Senckenb. Naturf. Gesellschaft, XI. pp. 1-168.

³ Mussel and snail shells are called in Japanese kai; in Nigori, gai.

The Japanese sea molluscs form a peculiar mixture of three Faunas. Northern, circumpolar species follow the cold currents and prevail accordingly near Yezo and the Kuriles, while on the shores of Ōyashima they are either not found at all, or only rarely and at greater depths. Here belong, for example, *Buccinum*, *Neptuna*, *Trophon*, northern species of *Purpura*, *Littorina*, *Acmaea* and numerous bivalves, including the Brachiopods *Terebratula*, *Terebratella*, *Rhynchonella*, of mussels proper, *Mya*, various *Pecten*s, e.g. *Pecten Yezonens*, *Lutraria* and *Neptunea*. The familiar *Buccinum undatum* with its varieties, which is so frequently met with on the North Sea coast, and which extends northward far into the Polar Sea, is found also near Yezo, as well as the Arctic *B. glaciale*. *Mya arenaria* and *M. truncata* occur on the Japanese coasts much further towards the south, though they are for the most part small, somewhat like those from the Baltic.

By far the largest number of Japanese sea-molluscs however point to the Indian Ocean and the Malay Archipelago. Here belong beautiful species of *Argonauta*, *Murex*, *Fusus*, *Tritonium*, *Cassiss*, *Cypraea*, *Pleurotoma*, *Tereba*, *Cancellaria*, *Dolium*, *Voluta*, *Oliva*; further of bivalves, among others more than 60 species of *Veneraceae* alone, many *Solenaceae*, *Mytilaceae*, *Arcaceae*. A considerable number of species of the genera and families here enumerated, as well as of various others, we find as far as to the Red Sea: *Tritonium nodiferum* Luck. extends even from the Mediterranean through the Atlantic and Pacific to the Japanese Islands, while *T. Rumphii* is known only from the Indian and Pacific Ocean. Both species (Japan. *Hora-gai*) which Linnæus includes together as *T. Tritonis* were formerly employed in Japan as signal horns, and provided with a brass mouthpiece to replace the tips. According to Pinto, in blowing them, riot was indicated by one blast, fire by two blasts, robbery by three, treachery by four, though they also played a part as signal horns in war, and were therefore called also *Jin-gai*, war mussel-shells or camp-snails. Their blowers were the *Hora-fiu* or *Hora-wo-fuku*.¹

If we separate from the molluscan Fauna of Japan the Boreal and Tropical admixtures, which form indeed the greater portion of it, there still remains a high percentage as a specifically Japanese or true Boreal Pacific basis, of which the larger number of species are found in all parts of the sea within the north-east monsoon-district, and not a few also on the Pacific coast of North America. So that e.g. the mollusco-fauna of the coast of California has a character allied to the Japanese.

Of Gasteropods the genus *Fusus* especially is abundantly represented in Japanese waters, and scarcely less well the allied genus

¹ Both these expressions for blowers of the Triton's horn have become in Japan the common designation for a person who is fond of boasting: "Ano hito wa hora wo fuku," he blows the Triton's horn, i.e. he is bragging.

Siphonatia, which is found almost exclusively in this district. Moreover, of the Trochideæ we meet numerous and in part extremely peculiar forms, as *e.g.* the remarkable Guildfordia triumphans. Of Umboonium or Rotella most of the known species occur in Japan.

The genus Sea-ear (Haliotis) is represented by six species, of which the larger especially, in spite of their being every year caught and eaten in great quantities, are still very common. The giant among them, Haliotis gigantea Chemn. (Awabi), extends, accompanied by H. discus Reeve, as far as Kamtschatka, but in the cold north is of a smaller size.

Many of the marine molluscs form, in addition to numerous other sea-animals, a prized and eagerly sought nourishment. Where the larger ones are wanting, even Lingula and Cerithium are not despised, though of course among those brought to market the larger kinds predominate. "This wealth of strikingly large, but externally not brilliant, I might say, coarse conchylia, is a trait which the Japanese Fauna has in common with its northern neighbour, the Kamtschatkan, North-west American Fauna and in general with the Faunas of the higher north, while the Conchylia of tropical and subtropical districts are in general conspicuous for the finer details of their sculpture and markings. The former are, so to speak, the bears and whales among the mussels" (von Martens). This, however, is more or less true in general of the larger mollusca, which are eaten, no matter what may be their geographical sphere or distribution.

Finally, we may add here the scientific and Japanese designations of a number of these larger and common forms: Naga-nishi and Kiri-gai (Fusus), Bai (Eburna japonica)—this snail-shell is often used by the boys as a top)—Aka-nishi (Rapana bezoar), Ki-gai (Dolium luteostoma, D. perdx), Subeta-gai (Natica vesicalis), Yeiraku-gai (Murex foliatus), Hora-gai (Tritonium tritonius), Sasai (Turbo cornutus), Su-gai (Rotella gigantea), Awabi (Haliotis gigantea, H. japonica), Tokobushi (Haliotis supertexta), Kaki (Ostrea grandis, O. multilamellosa), Umi-kami (Pecten japonicus), Hira-gai, Taira-gai (Pinna japonica), Shuru-gai (Mytilus), Aka-gai (Scapharca inflata), Yayembo or Sarubo (Arca subcrenata), Tori-gai (Cardium japonicum), Hamaguri (Meretrix lusoria), Suji-gai (Dosinia japonica), Asari (Tapes Philippinarum), Baka (Mactra sulcataria), Wara-gai (Lutraria), Miru (Mya arenaria).

Of great importance, as well for the quantities in which they occur as also for their utilization as food, are a number of Cephalopods, as: Tako (Octopus), Shidako (Eledone), Ika (Sepia), Tachi-ika (Loligo, Loliopsis), Surume (Onychoteuthis Banksii), Ika-surume (Ommastrephes). Also Tako-fune, *i.e.* the Polypus boat (Argonauta), comes in several species if not in great numbers into the fish market. The gigantic Megateuthus Martensii Hilg. is considered a rare phenomenon.

I. ECHINODERMS.

In the brief account of the species of this class of animals as yet discovered in Japan, I follow the kind communications made to me by our first authority in this department, my colleague Greeff. According to these, there are 26 kinds of sea-urchins (Japan. uni), Clypeaster and their relatives, of which many are eaten, and 12 species of asteridæ or star-fish. In the composition of the list of these animals also, we recognise the great influence of the Kuro-shiwo, as well as of the drift-current at the time of the south-west monsoon; for to these agencies chiefly we must attribute the distribution of many species over the Indian and Pacific Oceans, and particularly over the Malay and Japanese Archipelagos. Here belong, of the Echinidæ proper: *Echinotrix turcarum* Pet., *Echinometra lacunter* Bl., *Strongylocentrotus tuberculatus* Al. Ag., *Microcyphus maculatus* Al. Ag. and *M. zigzag* Al. Ag., *Mespilia globulus* Al. Ag., *Hipponoë variegata* Ag., *Fibularia australis* Desm., *Echinanthus testudinarius* Gray, *Peronella decagonalis* Ag., *Echinodiscus lævis* Al. Ag., *Lovenia subcarinata* Gray, *Breynia Australasiæ* Gray, *Echinocardium australe* Gray; while *Strongylocentrotus depressus* Al. Ag., *St. intermedius* Al. Ag., *Sphærechinus pulcherrimus* Al. Ag., *Temnopleurus Hardwickii* Al. Ag., *Phymosoma crenulare* Al. Ag., *Echinocardium mirabile* Al. Ag., *Spatangus Lütkeni* Al. Ag. and *Maretia alta* Al. Ag. have as yet been found only in Japanese waters.

As a cosmopolite of warmer parts of the sea we find the long-spined *Diadema setosum* Gray, but we are surprised at the occurrence of *Dorocidaris papillata* Al. Ag., for, although this species was only known previously in the North Atlantic Ocean from the West Indies along the Gulf Stream as far as to the coast of Norway, an accident brought a fresh example into my hands in Enoshima. A fisherman from whom I secured the specimen in question, assured me that he had obtained it from a depth of 200 fathoms, while seeking for *Hyalonema*.¹

Very remarkable, in connection with the starfishes (Tako-nomakura), is the occurrence of *Asterias rubens* on the Japanese coast. This creature displays an almost unexampled frequency and extent of distribution in the whole North Sea, in the western parts of the Baltic, near the Faroë Islands, Iceland, Greenland and the English coasts, so that it may be regarded as a characteristic North Sea Echinoderm form. Towards the south this starfish disappears it seems, completely; for it is not yet known with certainty to exist either in the Mediterranean or in the southern parts of the Atlantic Ocean. In other seas also, *Asterias rubens* is not known—

¹ Later enquiries which Dr. Satow has instituted at my request, and another specimen that was sent to me upon this occasion, place its occurrence beyond all doubt.

and then it suddenly reappears in Japan. *Archaster typicus* has a pretty wide distribution over the Indian Ocean ; other *Asteridæ* of Japan, on the other hand, appear to be confined to its shores.

Trepangs or *Holothuria* (Japan. Namako) are eaten fresh as well as dried even by the Japanese, but chiefly form an important article of export to China.

K. CORALS AND SPONGES.

The Cœlenterata are also numerous represented on the shores of Japan, although many characteristic forms of the Indian Ocean, as *e.g.* the *Fungiæ* do not extend so far, and *Milleporæ*, *Oculinæ* and other reef-formers do not occur. But other rock-corals, partly allied with inhabitants of the Mediterranean, such as *Astræa*, *Caryophyllia*, *Dendrophyllia*, etc., are not unfrequently found, and above all beautiful crust-corals, *e.g.* *Gorgoniæ*, *Corallium*, and *Isis*. More interest is excited indeed by the flint-sponges, of which the so-called glass-coral (*Hoshi-gai*) or *Hyalonema Sieboldi* may be called a real celebrity. It has always been brought to Europe from Enoshima on the north-west side of the Sagami Peninsula, but has as yet been fished for only at the entrance of the Bay of Yedo on the Awa side, at a depth of some 200 fathoms. Various other genera of glass-sponges, although less striking, have equally a high interest for students of them, but still await a thorough examination.¹ Here belong a splendid *Lithistida*, *Farrea*, *Leiodermatium*, *Dactylocalyx* and others, which remind us of forms that we know to occur in the Gulf of Mexico.

¹ It is to be hoped that Dr. Doederlein, a pupil of O. Schmidt, and doubtless well informed in this department, may find time to undertake it during his stay in Japan.

THE JAPANESE PEOPLE.

*A BRIEF ACCOUNT OF THEIR HISTORY, CIVILIZATION
AND SOCIAL CONDITION, FROM JIMMU-TENNÔ
TO THE PRESENT DAY.*

I.

HISTORY OF THE JAPANESE PEOPLE.

FIRST PERIOD.

FROM THE FOUNDING OF THE KINGDOM OF YAMATO UNTIL THE REMOVAL OF THE CAPITAL TO KIÔTO, OR FROM JIMMU-TENNÔ TO KUWAMMU-TENNÔ (660 B.C.-794 A.D.). EXPEDITION TO COREA. INTRODUCTION OF CHINESE CIVILIZATION AND BUDDHISM.

THE earliest history of Japan is, like that of all peoples, involved in obscurity. But even long after the legends, with which it begins, have assumed a more tangible shape, and the veil has been somewhat lifted, there is an absence of any sure sources by the aid of which we may separate the kernel from the shell, and free the old heroes from the mythical garb in which verbal tradition, handed down for many centuries, has enwrapped them.¹

According to the old myth, the divine pair Isanagi and Isanami, as has already been mentioned, created not only the Japanese island-world, but also its ruling race. Of the five children begotten of this creative pair in Awa-jima, the two eldest, both daughters, were most loved by Isanagi, and therefore exalted to heaven as Mistresses of the Day and of the Night. The Sun-goddess Amaterasu-o-mi-Kami (Chinese, Tenshō-Daijin),² *i.e.* the Divinity that looks from Heaven, was, according to a legend, begotten by the left³ eye of the god, as he was bathing in the sea,

¹ The Japanese until the 6th century of our era had no written language. They received it together with Buddhism from China. Their oldest work—it has indeed been called their Bible—is the *Kojiki*, *i.e.* the Book of Old Traditions. It appeared 711-712 A.D. in three volumes, of which the first contains the cosmogony and mythology of the old Japanese, while the two others treat of the history of the ruling house from 660 B.C. until 628 A.D. The *Kojiki* is said to be a compilation from two older works, written in the 7th century, but which had been lost. The second oldest Japanese book is called *Nihongi*, or History of Nippon. It was finished in 720 A.D., and its contents resemble those of the *Kojiki*, but it carries the history some seventy-one years further, *viz.* until 699 A.D. The third main work for the history of Japan, and indeed of the Middle Ages, is the *Nihon Gwaishi* or External History of Japan, which was only concluded in 1827. The following are the chief authorities from whom we derive our knowledge of these and later sources of Japanese history: Klaproth, Kaempfer, von Siebold, Satow, Hervey de Saint-Denys, etc.

² Shin or Kami means God.

³ The left side is with the Japanese and Chinese the most honourable.

while Tsuki-no-Kami the Moon-goddess, arose from the right eye. A grandson of the Sun-goddess was Ninigi-no-Mikoto,¹ whom she sent from heaven to rule over Japan. With his heavenly sword (Ama-no-sakahoko) he sounded the ground beneath him, and then settled on the Takachiho of Kirishima-yama, on the boundary of Hiuga and Ôsumi, in order from thence to take up the government.² His successor was Jimmu-Tennô (660-585 B.C.), with whom Japanese history begins.³

In the year 663 B.C. he left the little harbour of Mimidzu, on the east coast of Hiuga, in a boat with his followers, and after a stormy passage of three years made his way through the Bungonada and Seto-uchi to Naniwa, the Bay of Ôzaka. From here he subdued the neighbouring district, established his Ô-Yamato (Land of the mountains) in Gokinai, and set up his residence at Kashiwara, near the town of Nara (660 B.C.).

Jimmu-Tennô is the founder of the dynasty which still rules over Japan, and the present Mikado is the 121st of his successors. The Japanese ruling house accordingly traces itself back to the Sun-goddess Amaterasu, who therefore in the worship of ancestors, of Shintô (the state-religion), holds the highest place among the gods.⁴ Of the two names "Jimmu-Tennô," the former signifies the prime war spirit, the second is composed of the Chinese Ten and Ô, respectively meaning Heaven and King. This title "Tennô," King of Heaven, is borne by every Mikado; it is the name by which the people regularly call him. Instead of "Tennô" the word Tenshi, Son of Heaven, is also much used.⁵ As *Palladia* and as the oldest

¹ The grave of this demigod is pointed out near Sendai in Satsuma.

² On a blunt cone of piled-up stones, crowning the summit of the volcanic peak 1,672 metres high, the author, in the spring of 1875, saw the famous sword which tradition associates with this event. Its extraordinarily clumsy form points to a very great antiquity. The weapon is forged of bronze with a large proportion of copper, has not a flat blade, but a cylindrical shaft with several blunt projections, and towards the top is sharpened on one side. Its entire length is 1.3 metres, the length from point to hilt 1.02 metres. The mean circumference of this remarkable weapon is 0.23 metre, the greatest 0.25 metre, and the thickness of the handle 0.54 metre.

³ Jimmu-Tennô is the posthumous name under which he continues to live in history, as is also the case with his successors until the Middle Ages.

⁴ A proclamation of the Mikado, which appeared twelve years ago, referred to this circumstance in the words, "I am concerned, standing, as I do, between Tenshō-Daijin and my people . . ." and in a more recent proclamation occur the words, "My house, that from Jimmu-Tennô on to the present day has ruled over Dai-Nippon according to the will of the gods . . ." By such a legitimization it is indisputably the oldest dynasty on earth, and indeed it is carried back ten thousand years beyond Jimmu-Tennô to the time "when our divine ancestors laid the foundation of the earth."

⁵ The word Mikado is derived from mi, "exalted," and kado, "door," as in the "Sublime Porte." The idea conveyed by the term was that the Mikado is too lofty to be named directly, *i.e.* otherwise than figuratively. The Jesuits and the surgeons in the Dutch Company's service, as Kaempfer, Thunberg, etc., speak of him almost always under the name Dairi (Imperial Palace). There are

Sketch-Map of the Peninsula of Corea, Drawn after Japanese Maps by C. Harff.



symbols of imperial power Tenshō-Daijin gave to Jimmu-Tennō a round mirror and a sword; the former with the words: "Keep this mirror, my picture, and thy dynasty will endure as long as heaven and earth."

These insignia of power were preserved by Jimmu-Tennō and the eight following rulers in their throne rooms, until Sujin-Tennō, the 10th Mikado, had fac-similia of them made, while the originals were deposited and preserved in the temple built by him in honour of Tenshō-Daijin, near the modern town of Yamada in Ise. This temple of the Sun-goddess was from that time sacred to the whole nation, the Mecca to which even now thousands make pilgrimages from all parts of the country, and to which it was usual for even the rulers of the country to betake themselves at regular intervals as well as on the eve of great undertakings.

Besides this, early history records further of Jimmu-Tennō that he was a powerful and enlightened prince, who overcame all his foes, assured peace to the country far and wide, and interested himself in the development of peaceful industry, especially of agriculture. It is said he caused cereals to be planted, and hemp, as well as garlic and ginger.

The 10th Mikado, Sujin-Tennō (97-30 B.C.), whose name has been already mentioned, was a remarkable civilizer of his people. He encouraged the cultivation of the soil, and amongst other things caused the first reservoir to be made for irrigating the rice-fields in dry summers. As a further sign of his great thoughtfulness, it is mentioned that he was anxious for a juster system of taxation, and made regulations for the maintenance of the priests. After he had suppressed an insurrection, Japan for the first time, so far as history records, came into relations with Corea.

The north-western portion of this peninsula belonged at that time to China, while the remainder was broken up into a number of small independent states, of which we hear much in the sequel¹

many other designations which are also employed. The Japanese flag, a red sun in a white field, is supposed to express the descent from Amaterasu, and even the favourite flower of the Japanese, the Chrysanthemum (*Kiku*), on shields and coins is to be interpreted as a symbol of the sun.

¹ As the accompanying sketch-map of Corea shows, the state of Koma or Korai lay on the east side of the peninsula, washed by the waves of Broughton Bay. It was bounded on the south by Shiraki or Shinra, then on Broughton Straits by the little Minana or Kara and finally along the west coast of the peninsula by Kudara or Hiyakusai. Minana became later a Japanese colony, Kudara was for a long period a protected state, while the dependence of the two others upon Japan was at all events much slighter, and indeed doubtful. In later times when the person of the Mikado became less prominent and long civil wars required all the forces and means of Japan, these transmarine possessions were lost. Shinra and Korai were enlarged at the expense of Minana and a portion of Kudara, and formed themselves into three independent kingdoms, the Sankan, as they are called in Japanese history, namely Korai, from which the name Corea is derived, Shinra and Hiyakusai. Still later (A.D. 1391) followed the fusion of these three countries into one kingdom of Chōzen or Corea.

Now happened what has so frequently repeated itself in history; one of these was oppressed by a powerful neighbour, and called in foreign aid. In this case it was Mimana on the south coast of Corea which turned to Japan for protection against its northern neighbour Shiraki, promising to pay tribute in return. From this and from the further circumstance that the despatch of a Japanese ambassador to Shiraki was enough to induce it to give way, we may infer the respect in which Japan even at this time was held by its western neighbours. Mimana kept its promise, sent gifts and tribute to Sûjin-Tennô (32 B.C.), and thus established a relation of dependency towards Japan, which was later extended to other of the Korean states, and became of the greatest importance for the further development of Japan.

The younger son and successor of Sûjin-Tennô, the 11th Mikado, under the name of Sûinin-Tennô, who is supposed to have reigned from 29 B.C. to 70 A.D., is also renowned as a sagacious and good prince. By laying out additional ponds and canals he contributed to the development of rice-culture, while by rice-magazines he tried to guard against famine. He attempted to promote the elevation of Kami-worship, in which his father had already taken great interest, among other ways by building the famous temple of the Sun-goddess Tenshō-Daijin in Ise, which became the chief national shrine. The most noteworthy act of his reign, however, was the passing of a law in the year 2 A.D., repealing an ancient and cruel custom, by which, on the death of the Mikado or of one of his near relatives, his servants were buried alive with him. From this time the practice was substituted of by decorating the grave of the deceased with human figures in terra cotta, called Tsutschi Nigio, as representatives of the servants.

Keikō-Tennô (71-130 A.D.), the 12th Mikado, is likewise represented as an active prince, devoted to the welfare of his people. Immediately after his accession he had to repel an invasion of the Kumaso, which made an inroad from Kiushiu into the district of the modern Nagato and Suwō.¹ His rule was extended above all by his younger son O-usu, who under the name of Yamato-Dake, Warrior-prince, continues to live in numerous legends as one of the most celebrated of the old heroes of Japan. He overthrew the Kumaso in Tsukushi (Kiushiu), the inhabitants of Idzumo and the

which reckons its history from this period, and now (1880) is in the 489th year from its foundation. The map which is intended only to give a clearer idea of the historical relations of Japan to this peninsula, gives the Korean names according to their Japanese pronunciation. The two new treaty-ports, Fusan and Gensan, will also be found in the map.

¹ These Kumaso seem to have been a tribe related to the conquerors of Japan, who had likewise in early times established themselves in Kiushiu. It is nowhere recorded that the rule of Jimmu-Tennô or of his earliest successors had extended over Kiushiu, and there can be no doubt that all the struggles which the new empire had to undergo until the 2nd century, were with related tribes in Southern Japan.

Emishi in Kuwantô, and is therefore rightly reckoned as the real conqueror of that district afterwards so important,—the plain between Yedo Bay and the mountains of Nikkô, as well as between the Pacific and Usuitôge on the west. This Kuwantô or Country on the East of the Door (the Hakone Pass), was also called Adzuma-kuni (Country of my Wife). This designation is referred to a lament of Yamato-Dake over the loss of his beloved wife, Tachibana-Hime, who on the passage across Yedo Bay, had flung herself into the stormy sea in order to mollify Neptune (Kompira) and to secure her husband a prosperous landing on the peninsula of Kadzusa-Awa.

It is worth while to observe what is recorded in the *Kojiki* as the occasion for this conquest of Kuwantô. According to this, Keikô-Tennô heard of a country of Hikami to the north of his kingdom, which was said to be very fertile, and whose inhabitants, the Emishi, tattooed themselves and allowed their hair to grow wild and quite uncared for. These Emishi, called also Ezo (Yezo), were obviously nearly related to the Ainos. From the circumstance that they made such an impression, we may conclude that the founders and extenders of the sway of Yamato had not previously come into contact with such aborigines, but had confined their conflicts exclusively to related tribes who, or their ancestors, were immigrants like themselves.

Under the rule of the 14th Mikado, Chuai-Tennô (191–200 A.D.), the Kumaso in Tsukushi rebelled, and made an expedition to this island necessary. Chuai himself led his army, accompanied by his wife Okinaga-Tarashi-Hime, equally distinguished for her beauty, intelligence, piety, energy and warlike spirit, of whom, under the name of Jingu-Kôgô, Japan has preserved a grateful remembrance. In Kiushiu she conceived the plan of an expedition to Corea, of which the greyheaded counsellor Takenouchi approved, but which the Mikado rejected. The latter however died soon afterwards, without experiencing the paternal joy which was awaiting him. His death was kept secret; Jingu-Kôgô, supported by Takenouchi, undertook the regency, and immediately proceeded to carry out her favourite idea. She had a fleet fitted out, herself in manly armour took the chief command, and sailed away, accompanied by her trusty counsellor, to Shiraki, intrusting the command in Kiushiu to one of her generals (202 A.D.).

The king of Shiraki, dismayed at the tidings of the disembarkation of a Japanese force, begged for peace, sent gifts, promised tribute and gave hostages. The kings of Koma and Kudara (see map), seized by the universal alarm, also yielded and promised the payment of tribute. The Empress, after leaving behind several officials, returned with the fleet, the gifts, and the hostages, to Tsukushi (Kiushiu), and then bore a son, Ôjin-Tennô, who afterwards succeeded her as 15th Mikado.

Amongst the other notable achievements of the Empress Jingu-

Kôgô, was the suppression of a rebellion brought about by her two stepsons, the legitimate heirs to the throne of Chuai, the sending of officials to China in order to study that country and its customs, as well as, not long afterwards, the reception of a Chinese embassy, events which are in the main confirmed by Chinese annals, though they are represented in a somewhat different light. In Corea the attitude of Shiraki gave rise to difficulties, as was the case also in later times, and made new expeditions necessary.

The conquest of Corea by Jingu-Kôgô was an event of incalculable importance for the later development of Japan. Corea became the connecting bridge, over which in the sequel the whole civilisation and culture of China made their way into the Land of the Rising Sun, with Buddhism and the philosophy of Confucius as their vehicles, and with them the language, laws, and literature, the domesticated animals and cultivated plants of China, as well as its peculiar and extremely interesting industry.

Ôjin-Tennô,¹ the 15th Mikado (270-310 A.D.), son of Jingu-Kôgô, made Emishi and Coreans dig trenches and form reservoirs of water for rice culture, which in part are still in use. From Kudara he imported horses, arms, mirrors, tailoresses, smiths, weavers, brandy makers, and from China the learned Wani, to whom he intrusted the education of his son. It was through Wani that the Chinese philosophy of Confucius and Mencius first found its way into Japan. In this period also the first considerable immigration of Coreans into Japan took place, as well as the victorious expedition against the rebellious Shiraki.

In the Japanese annals Ôjin-Tennô immediately succeeds his father as Mikado, and therefore even before he was born. According to the old belief it was his spirit which animated his mother Jingu-Kôgô, and lent her the warlike courage which she displayed in so surprising a degree. In consequence of this view he was in later times apotheosized by the Minamoto into the God of War, and a temple was erected to him on the island of Tsukushi at Buzen. Upon this occasion, so runs the story, eight white banners descended from heaven. In consequence of this the Miya² received the name Yabata-no-Yashiro, the Sanctuary of the Eight Banners, and when later the Buddhist priests, in order to find easier access for their doctrines, incorporated the principal Shintô-deities into their systems as forms in which Buddha appeared, Ôjin-Tennô was

¹ The reliability of the Japanese dates for the birth and reign of Ôjin-tennô, is more than doubtful. He is said to have been 69 when he ascended the throne, and to have died at the age of 110. The Chinese annals are silent on the question. It appears still more incredible, that Takenouchi, who brought to the 12th Mikado the first news of the Emishi, and was afterwards a counsellor of the 13th and 14th, and especially of the Empress Jingu-Kôgô, should have been still alive in the reign of Ôjin-Tennô, and have occupied the same position. He must on this supposition have been 300 years old.

² Miya, a shintô-temple.

represented as the eighth incarnation of a Bosatsu (Bodhisattva), and the word Yabata was translated into the Chinese Hachi-man (eight banners). Since then Shintôists as well as Buddhists worship Ôjin as Hachiman. In all parts of the country temples have been erected to this Japanese Mars, and many places bear after him the name Hachiman or Yabata. It was to Hachiman that the aspiring Japanese youth addressed his prayers, when, fired by ancient stories of heroes, he wished that like bravery might be his; it was to his protection that mothers commended their sons, and wives their husbands, as they went to war.

Under the rule of the 16th Mikado, Nintoku-Tennô (311-399 A.D.), the first experiments in the breeding of silkworms seem to have been made. In other respects, moreover, this benevolent prince appears to have laboured for the elevation of his country—by a three years' remission of taxation, by multiplying the irrigation trenches for rice-culture, and by constructing new magazines and roads. Irregularities in the payment of the tribute rendered necessary a new expedition to Shiraki. A revolt also of the Emishi occurred within this period.

Of the next succeeding rulers we have little information. Their sensual inclinations and effeminacy in other respects led to civil wars, and obviously threw the country partly back into the earlier barbarism; the links with Corea were loosened, and the differences between the several states, as well as a revolt in Mimana, led to new expeditions to this peninsula.

This happened under the 21st Mikado, Yuriaku-Tennô (457-479 A.D.). The whole of the fifth century seems to have been spent in frequent revolts and dynastic changes as well as in quarrels in and with Corea. A change for the better only came with the introduction of Buddhism towards the middle of the 6th century. The first statues of Indian saints are supposed to have come to Japan towards the end of the reign of Ketai-Tennô, the 26th Mikado (507-531 A.D.), although the new doctrines obviously did not then find the ground favourable for their propagation, so that the year 552 is generally regarded as the era of the introduction of Buddhism. Kudara was the principal intermediary. Its king sent to Kimmei-Tennô, the 29th Mikado (540-571 A.D.), bonzes, statues of Buddha, prayer-books, temple ornaments, recommended the new doctrines, and praised their good effects. At the court, however, the adherents of Kami-worship were still in the ascendant, and the Mikado was compelled to hand over the presents to a high officer who had already gone over to Buddhism, and to beg his vassals in Corea, instead of bonzes to send him scholars and artists. In particular he asked for physicians and apothecaries, soothsayers and almanack-makers, and in exchange for them he sent munitions of war.

The influence of the kingdom of Wo, as the Chinese called Japan, upon the affairs of Corea had long before fallen very low. Partly

of its own accord, partly under compulsion, it had resigned its old possession of Mimana to its neighbours, and these, Kudara on the west, Shiraki on the east, and Koma (Korai) north of Shiraki, divided the possession of the peninsula between them, and formed its San-kan (three clans). In their continual quarrels the aid of the kingdom of Yamato was invoked, chiefly by Kudara, now against one neighbour, now against the other, so that what the Japanese annals mention as the payment of tribute from one or another of these countries, is more correctly to be explained as the sending of presents, which one or other of these states made to the Mikado, when they required his assistance against their neighbours. Through the whole of the 6th century this state of things continues. The wish to reconstruct Mimana as a Japanese province is handed down from one Mikado to another, but no one of them succeeds in carrying it into effect.

As regards Buddhism, the champions of the old order succeeded once more in representing prevailing diseases as punishments from the Kami, and in burning down the existing statues of Buddha with their temples. But Kudara sent new ones, and the number and influence of the adherents of the Indian saint increased visibly, even in the reign of Sushun-Tennô, the 32nd Mikado (580-592). During this time Kudara sent temple-architects, turners, painters, priests, Buddhas and relics, though it was only the 33rd sovereign, the Empress Suikô-Tenno (593-628), who openly declared herself in favour of the new religion and gained it wider admission. She appears, however, to have left the government entirely to her adopted heir, Prince Mumayado-no-Ôji or Toyoto-Mimi, who is described as zealously devoted to Buddhism, intelligent and highly educated. To his influence, or more probably still, to that of the bonzes, it is to be attributed that the bloody conflicts in Corea soon came to an end, better relations were established with the states of that peninsula, and Koma, even, sent a contribution of 300 rios towards a Buddha-statue, as well as several priests. One of them, Donchô, at once a great scholar and an inventor, taught the Japanese the preparation of paper and ink, as well as the use of mill-stones (towards 600 A.D.). From Kudara came a dancing and music-master, and the Celestial Empire also sent its civilisers. Generally speaking, indeed, under the rule of the Empress Suikô a tolerably lively intercourse seems to have been kept up between China and Japan, as appears also from a Chinese history, translated into French by Hervey de Saint-Denys. Suikô-Tennô, among other things, introduced also the usual offices and ceremonies of the Chinese court, with a rigidly maintained subordination of rank. The regent died ten years later than the Empress, and received the posthumous title of Shotoku-Taishi (Great Master of the Shining Doctrine of Virtue). At his death there were already, according to the Nihonshi, 46 Tera (Buddha-temples) and 816 Bozu (bonzes or priests of Buddha), as well as 569 monks in Japan.

Intestine conflicts over the succession to the throne weakened the country after the death of the empress and, during the more noteworthy administration of the 38th Mikado, Kōtoku-Tennō, as well as of his successor, Japan was subject to a dictatorship, and the government was not really in the hands of the sovereign. Various institutions, almost wholly taken from China, whose constitution was more and more adopted as a model, may be traced in particular to the time of Kōtoku-Tennō,—institutions which in part have continued down to the present. To these belong, above all, the introduction of the calendar and chronology of the Chinese, with their year (Nengō), the Zodiac, etc., and besides the highest offices of the Sadaijin, Udaijin, and Naidaijin.¹ Moreover, the more exact division of Japan into the Kinai and the seven Dō is assigned to the reign of the 30th Mikado, as well as a strict injunction against the primitive practice of burying living servants (slaves) and wives with the corpses of their lords, from which it follows that since the time of Sūjin-Tennō this barbarous custom had again become common.

In the year 662 the imperial Prince Nakano-oye, who had directed the administration under his two predecessors, succeeded to the throne as the 38th sovereign (662-670). His historical name is Tenji-Tennō. Several notable events mark his brief reign, above all that he created the supreme office of a minister-president, Daijō-Daijin (Great Minister of the Great Government), and entrusted it to his eldest son Otomo, while he made his friend and counsellor, Nakatomi-no-Kamatari, Naidaijin. At the same time, as a mark of his appreciation of numerous faithful services, he allowed Nakatomi to adopt for himself and his family the name Fujiwara. Fujiwara (Wistaria-field) is, next to the Mikado family, the oldest family in Japan; a race that in the course of time played a distinguished part, and even down to our time has enjoyed many privileges.

In the reign of Tenji-Tennō, the king of Shiraki, aided by China, carried war into the country of Kudara, defeated the Japanese garrison and compelled them to embark for their own country. Several thousands of the inhabitants of Kudara followed and found a friendly reception in Japan. They were distributed as settlers through the several provinces, and they were granted, like previous immigrants, a ten years' remission of taxation, which was afterwards still further extended by the 40th Mikado.² This sovereign, known

¹ Daijin = great minister, Sa = left, U = right, Nai = inner, private. The left side is in Japan superior to the right, and thus the Sadaijin is higher than the Udaijin.

² From the subjection and absorption of the indigenous Emishi on the one hand, and of the Koreans on the other, with the inhabitants of the kingdom of Yamato, sprang the Japanese people, which has indeed generally preserved the Mongolian type in physical conformation and language, though in this respect, and still more in its national character, it varies essentially from all the other

by the name of Temmu-Tennô, endeavoured during his reign (673-686) to imitate China still more than his predecessors. He created a number of new degrees of rank, issued minute regulations for the arrangement of the hair, especially at the court, and made the Buddhistic confession obligatory. He forbade, moreover, the eating of flesh. Under his rule the first silver-mine in the country was discovered in Tsushima.

The annals record the Empress Jitô-Tennô (687-696) as the 41st sovereign. In her reign the number of Buddha-temples in the country increased to 545. An important advance in house-building was the introduction of roofing-tiles.

The 42nd Mikado, Mommu-Tennô (697-707), made the peasants cultivate the mulberry and lacquer tree, established markets, revised the laws, and promoted the study of Chinese philosophy. The Buddhist priest Dôshô, who died during his reign, had directed that his body should be burnt, and thus laid the foundation of cremation, which afterwards became, at least with one sect, the Monto, the general rule.

In the reign of the Empress Gemmei-Tennô (708-714), the 43rd sovereign, the construction of a road (the Nakasendô), through Mino and Shinano, deserves mention, as well as the discovery of a copper mine in Musashi. Within this period falls the compilation of the oldest extant annals, the *Kojiki*, which was followed under the next reign, that of the Empress Genshō-Tennô (715-723), by the issue of the *Nihongi* as the second oldest source of early Japanese history. It may be further mentioned of both princesses that they enlarged the number of provinces, and added to them, besides others, Dewa and Mutsu; the Emishi of northern Hondo were also brought into subjection. However, in the reign of the 45th Mikado, Shomû-Tennô (723-748), they revolted, were defeated anew by Fujiwara-no-Umakai, who was sent against them, and were partly distributed through the other provinces. To guard against fresh insurrections, the fort of Taga (724) was shortly afterwards constructed. It was placed near the village of Shikawa, $2\frac{1}{2}$ ri east of the town of Sendai. The site is still marked by a memorial stone, the Taga-jô-no-hi, or monument of Taga Castle, the oldest in Japan. It is a grayish-green slab of sericite-slate 6 feet high and $3\frac{2}{3}$ feet broad, one side of which is polished and bears a Chinese inscription.¹ The administration of Shomû-Tennô was marked by the attention paid to Chinese erudition, under the direction of Shimotsu-Michi-no-Makibe, who had spent nineteen years of study in China, and after his return was advanced to

peoples of Eastern Asia. And it is these very points of variance which have in recent times brought the Japanese so near to us and have produced so much greater sympathy, than in the case of all the other members of the Chinese sphere of civilisation.

¹ See a further account of it by Rein, "Die Küste von Sendai und Nambu," in the *Mittheilungen der deutschen Gesellschaft*, 7 Hef, p. 20.

the rank of a Udaijin.¹ He is still more notable however in the history of Japanese civilisation as inventor of syllabic writing, the Katakana, which he derived from Chinese characters. To this period belongs also the discovery of the first gold-mine, as well as the introduction of orange-trees from China.

The period of the next four succeeding sovereigns is distinguished by few conspicuous events. In order to protect the people against famine in consequence of failure of the rice crops, not only were new magazines constructed and filled in cheap years, but also the cultivation of other crops most zealously promoted.

The age of Kuwammu-Tennô¹ (782-807) fills an important chapter in the history of Japan, as he ranks with the most eminent princes of the country, whose destinies he directed, as 50th Mikado, with care and success. In all departments he exhibited great zeal and understanding of the manifold requirements of the country. He took pains in making dams and canals to regulate the courses of the rivers and extend communication, put an end to mendicancy and introduced order into the civil service. His interest was not less keen in the education of the young and in religious needs. The most noteworthy act of his reign, however, is the removal of the royal residence to the village Uda, afterwards Kiôto (794), where he built, on the right bank of the Kamo-gawa, the Heianjô (City of Peace), in which henceforward all his successors dwelt down to 1868. The Palace had twelve gates and the town surrounding it soon numbered 1,216 streets, and in consequence of its beautiful position, regular architecture, cleanliness, architectural monuments and historical reminiscences, no less than as the seat of learning and art, became the much esteemed centre of the country. The city was constantly spoken of as Miyako or Kiô, the former being the Japanese, and the latter the Chinese word for "residence of the sovereign." Buddhist superstition had by this time struck deep roots in all strata of society. Among numerous striking illustrations of it should here chiefly be mentioned the belief that towards the north-east lay the Ki-mon (Devil's Gate) through which all evil came. Kuwammu-Tennô accordingly built on the highest mountain to the north-east of his palace, Hiyei-zan, a splendid temple,² and handed it over to the Tendai sect, that they might here, as sentinels over the Heianjô and the town, ward off evil by continual recitation of litanies, by singing and blowing of trumpets. In this way was laid the foundation of the deep reverence which Hiyei-zan afterwards enjoyed as a sacred mountain, and of the mighty influence of the Tendai sect, which was only shaken by Nobunaga.

Of other noteworthy events in the age of Kuwammu-Tennô we must further mention a fresh insurrection of the Emishi in the north, which was speedily suppressed by Tamura-Marô, as well as the first introduction of cotton. Some Indians were wrecked,

¹ Pronounce Kammu Tennô.

² Buddhist temples are also monasteries.

as the chronicle records, on the coast of Mikawa. They brought some cotton seeds from their ship to the shore, which were distributed in the southern and western provinces. It appears, however, that the cultivation later disappeared, for many indications point to a subsequent and much later introduction from China.

Kuwammu first substituted the Chinese title Tennô for the old Japanese Sumera or Sumera-Mikoto.

If we review once more the most prominent occurrences in the fourteen centuries since the founding of the dynasty of Yamato by Jimmu-Tennô until Kuwammu-Tennô's removal of the royal residence to Kiôto, the partial conquest of Corea by Jingu-Kôgô, about 202 A.D., and its consequences, are undoubtedly by far the most important. Although in the succeeding centuries numerous expeditions and many a conflict are associated with this transmarine possession, and the dependency of the Corean rulers upon Japan becomes more and more relaxed until it is completely dissolved, yet these relations to the Asiatic mainland, lasting for centuries, were the means by which new life was infused into the old barbaric condition of Japan. It was the stream of Chinese civilisation which flowed by way of Corea into the Land of the Sunrise. Chinese political institutions and jurisprudence, Chinese writing and literature, Chinese ethics and medicine, Chinese arts and industries, thus chiefly found their way to Japan, and here met with a favourable reception. The vehicle of this peculiar civilisation is Buddhism, much more than the influential philosophy of the Chinese sages. This mighty tree, with its roots in India, spread its branches in the 6th century of our era also over Japan. Under its shadow germinated and developed fruits such as had already ripened in China. The external development of Japanese power was now followed by inner refinement of life and the need of allowing the many seeds which had been implanted to develop in peace. Hitherto within the Gokinai almost every new Mikado had chosen himself a new residence. Such a continual change in the seat of government was no longer admissible and terminated with its removal to Kiôto by Kuwammu-Tennô. Thus Kiôto (in old books always called Miyako; *i.e.* chief town) became to a certain extent the heart of Japan, from which for many centuries the pulse-beat of the national life took its rise. Ôzaka (Naniwa), however, was the great auricle at all events for the material aspect of this life. The main roads (dô) of the country ran like arteries north and south from Kiôto, each forming an important channel of nourishment for an outlying member, for a series of provinces, enclosed by the sea and mountains.

The influence of Chinese civilisation upon the court was not favourable. The old warlike spirit disappeared, to be replaced by all kinds of effeminacy. A whole army of officials and titles was

created, the cut of the dress and hair, ceremonies and many other things were prescribed in accordance with rank, while the much more important interests of the country were left to officials and generals. It became the fashion to abdicate early, and either to dream life away with shorn head and in retirement as a Buddhist monk, or to squander it in debaucheries of all kinds; yet in most cases probably the step was taken involuntarily. Moreover, in the age of the Fujiwara it frequently happened that noble-minded rulers, discouraged and despairing in their efforts for independence, after long and useless struggling sought the effectual shelter of a monastery, merely to escape the irritating fetters of the court, which forbade any freedom of movement. The inheritance passed in many cases to minors or to intriguing women, and, as they were unable to direct the affairs of the country, there were sovereigns who reigned, and privileged families to whom fell the office of Major-domus or "*Maire du Palais*," and of government. The principal houses vied with each other in the effort to secure this great influence, and thus brought frequent civil wars upon the country. Three families, namely the Fujiwara, Taira, and Minamoto, in this respect play successively a specially prominent part, as is further shown in the next section.

In the first centuries of the empire of Yamato, the form of government was very simple. At that time there was no distinction between civil and military officers. Every able-bodied man was a soldier, and the Mikado the leader of his army. The supreme command was never in the hands of a subject. When the war was over, the army was disbanded and every one returned again to his wonted peaceful occupations. The sovereign power lay wholly in the hands of the monarch.

With the introduction of the Chinese system of government, this state of things was altered. A distinction was made between civilians and soldiers. At the outbreak of a war the Mikado no longer took his place as commander-in-chief at the head of his army, and he no longer directly exercised the supreme civil power. Then it was that an official bureaucracy developed itself more and more on the one hand, and an hereditary military class on the other. At the head of the former stood the court nobility, the Kuge; whilst the leadership of the military class or Samurai was in the hands of the Buke (the military nobility) and especially the Minamoto and Taira families. When finally the Fujiwara governed the country, it became the standing rule to bestow the chief military command upon members of the Minamoto and Taira.

SECOND PERIOD.

FROM THE FOUNDATION OF THE CAPITAL OF KIÔTO UNTIL THE DEATH OF YORITOMO (794-1199 A.D.). BUREAUCRATIC RULE OF THE FUJIWARA, MILITARY DESPOTISM OF THE TAIRA AND MINAMOTO. KUWAMBAKU, SHÔGUN AND FEUDALISM.

As has been already mentioned (p. 221), Nakatomi-no-Kamatari, the friend and adviser of the 38th Mikado, towards the year 670 received the surname Fujiwara (Wistaria-field). This was a title of honour which he and his descendants were to bear in recognition of his faithful services, a title to which later many privileges were attached, which partly continue down to the present day.

The Fujiwara form, with the exception of the more restricted Mikado family, the oldest, most respected and most influential house in Japan. It derives its origin from a companion of Jimmu-Tennô. For centuries the Fujiwara had all power in their hands. The office of Kuwambaku, or Regent, established in 888,—which was abolished only by the restoration in 1868,—was hereditary in this family, as the office of Shôgun was later in that of the Minamoto. Of the 155 families of the old Japanese court nobility (the Kuge), the first 95 trace their origin to Kamatari, and bear the name of Fujiwara in addition to their own family names. Five of them, called Gosekke, have occupied a specially privileged position down to the present day; it is from them alone that the Mikado may choose his wife. The office of Daijô-Daijin (Minister-president), is likewise attached to exalted Kuge of the Fujiwara house. The present occupant of it, Sanjô-Saneyoshi, belongs in point of rank to the eighth Kuge family.

The Fujiwara for many centuries held possession of almost all the higher civil offices. Here and in the intrigues of the court they developed their main activity. Numerous ties of relationship connected them with the reigning house. The mothers and wives of the Mikados were all Fujiwara, and the princesses of the blood were almost all married to members of this family.

Heizei-Tennô (806-809), the eldest son and successor of Kuwammu, abdicated after three years in favour of his brother Saga-Tennô (810-823), but afterwards conspired against him. Of such occurrences there are many to be found in later history. Till then many Emishi had dwelt scattered through the country as prisoners of war. Saga-Tennô distributed lands among them for cultivation, and granted them the same civil liberties as his other subjects. He also introduced the cultivation of the tea-shrub. At court he attached great importance to a strict following of Chinese ceremonial, and sought, by severe edicts against their immorality and against the abuse of popular credulity, to prevent the degeneration of the priesthood. Earthquakes and earthquake-floods visited

the country, and led the Mikado to engage the co-operation of the rich in alleviating the distress and in attempting to restore the cultivation of corn.

During the reign of his brother Junna-Tennô (824-833), the country suffered still more, in consequence of drought and infectious diseases.

The 54th Mikado, Nimmiô-Tennô (834-851), the son of Saga-Tennô, is famed as a zealous promoter of agriculture and a protector and benefactor of the poor and sick, for whom he built asylums. In order to procure the necessary means for this purpose, he introduced economy into the court, and reduced the incomes of his functionaries by 25 per cent. In this he was advised and influenced by members of the Fujiwara family, which soon became all-powerful, as early indeed as the reign of the 56th Mikado, Seiwa-Tennô (859-876), whom they proclaimed ruler when a boy of nine years old, while the Daijô-Daijin Fujiwara-no-Yoshinisa governed the country. When the regent died and the Mikado himself wished to take the reins of government, he was forced to abdicate, his son Yôzei-Tennô (877-884), only ten years of age, was raised to the throne as 57th Mikado, and Fujiwara-Mototsune was proclaimed regent. A relative of the latter, governor in Akita, Fujiwara-Okio, suffered a severe defeat from the rebellious Emishi. In general the Fujiwara showed little military spirit. The civil service and court intrigues were their domains, which they lost later, when the Taira and Minamoto were no longer content with their former position as military commanders in the provinces.

When Yozzei-Tennô attained his majority, he too was dethroned—ostensibly because he was too much given to women and was unjust—and his son, in this case also a child, was raised to the throne, but fared no better. Immediately after the accession of Uda-Tennô, who as 59th Mikado (888-897) represented a mock-power, Fujiwara-Mototsune, the Daijô-Daijin, who had grown old in intriguing and Mikado-making, assumed the hereditary dignity of Kuwambaku (*i.e.* Leader and Reporter of Government), and thus raised himself and his family to the highest degree of power; for the Kuwambaku was the regent of the country, the Mikado being generally only a puppet, without any will of his own. It devolved upon the regent to arrange all communications with the Mikado, and to hand in the reports of the other civil and military officials.

About this time pirates from Shiraki visited the coasts of Kiushiu and of Tsushima, but were defeated by the Japanese. From the number of ships (45) which were engaged on the side of the Coreans, the affair appears to have been not so much a private raid, as an invasion set on foot by the state of Shiraki, quite analogous in character to those which had been earlier undertaken by the Japanese against Corea.

Towards the end of the reign of Uda-Tennô an influential rival

to the Fujiwara arose in the person of Sugawara-Michizane, whom they felt obliged at all hazards to chase out of the field. He was famous for his great learning, a man who had risen from being simply a tutor of Uda-Tennô to be his friend and minister, and who exercised a wholesome influence upon the monarch. They proposed therefore to compel this well-disposed and noble-minded ruler to abdicate and to set upon the throne an apparently more pliant tool in his son, a child twelve years of age. They succeeded, and in 898 Daigo-Tennô became the 60th Mikado, and reigned until 930. His father bequeathed him Sugawara-Michizane as minister, whom however the Kuwambaku Tokihira contrived to oust and to send into banishment to Tsukushi (Kiushiu). There he died, as it is said, a miserable death by starvation. He was afterwards deified as Tenjin (Heaven-man) and patron of learning, in whose honour many temples were erected, and to whom Japanese schoolboys were in the habit of praying. The Sugawara were a very old house, which had also sprung from the Mikado family, its origin dating almost as far back as that of the Fujiwara. Politically it never played so great a part, but has always stood in high esteem, in consequence of the learning of many of its members. Six of the old Kuge families trace their descent from it.

From the time of Tokihira two other families among the higher nobility, the Taira and Minamoto already mentioned, gradually came to the front; the star of the Fujiwara began slowly to pale. In consequence of their many ties of relationship with the imperial house they were able of course at first to continue their old intrigues. Thus history informs us that when after Tokihira's son, Tadahira, stepped into the dignity of Kuwambaku, he succeeded in inducing Daigo-Tennô to abdicate, and in fixing as his successor the youngest of his eleven sons, a boy eight years old. This was Shujaku-Tennô, who occupied the throne as 61st Mikado from 931 to 946. During his reign a change of name and dynasty took place in Shiraki, the Kin family being succeeded by the Wo family, who adopted for the country the name of the most north-easterly province of Korai, from which the name Corea is derived.

In this period falls also the great insurrection of Taira-no-Masakado, who as Governor of the Kuwantô conceived the idea of making himself independent, after the post had already for several generations been hereditary in his family. He took the title of Shinnô (Prince of the Blood), collected an army and rallied all those who were discontented with the administration of the Fujiwara, and fortified himself at Sarushima in Shimôsa. Simultaneously his ally Fujiwara-no-Sumitomo raised the standard of rebellion in Iyo. Fujiwara-no-Hidesato, to whom it was intrusted to suppress the rebellion, assumed the pompous title of Sei-tô-tai-Shôgun (Great Generalissimo for the subjugation of the East), remained quietly in Kiôto and sent out two subordinates, Taira-no-Sadamori against

Masakado, and Tachibana-no-Tôyasu against Sumitomo. The rebels were crushed and the power and arrogance of the Fujiwara in Kiôto still continued.

For the first time, though to begin with only for a brief space, the house of Taira (Chinese *Hei*, peace) had come into the foreground of events. It was founded by Taira-no-Takamochi, a natural great-grandchild of Kuwammu-Tennô. Its great political rôle falls between those of the Fujiwara and Minamoto in the middle of the 12th century. When this was played out, the name continued to live in five Kuge families, which trace their descent from the Taira. Moreover the earlier possessors of Tsushima and various other Daimio families claim descent from the Taira.

The brave Minamoto also (Chinese *Gen*, Genji, Source of the Spring) from this time came more and more to the front in the theatre of history. This highly respected family, which gave the country its greatest and most celebrated heroes, claims to descend from the 52nd Mikado, Saga-Tennô. The latter had four sons and as many daughters. These "Saga-Genji" form the eldest branch of the Minamoto family. A second branch is called "Seiwa-Genji," and Tsunemoto, a grandson of Seiwa, the 56th Mikado, is regarded as the head and founder of this line. From him descend all those famous Minamoto who will be mentioned in the course of this history. There is yet a third branch called Okimachi-Genji.

The office of *Sei-i-tai-shôgun*, *i.e.* "the great general who chastises the barbarians," became their especial domain. The later Shôgun families, Ashikaga and Tokugawa were only branches of it. Through seven centuries and numerous vicissitudes this family held temporal sway until the year 1868.

In the 9th, 10th, and 11th centuries, so long as the Fujiwara still had the government in their hands, and the Taira in the south-west of the empire, and the Minamoto more in the north-east were gaining military glory as brave generals, the two houses continued to maintain a tolerable understanding; but when they began to supplant and to replace the Fujiwara, violent rivalry and enmity broke out between them, and there arose bloody conflicts which kept the country in almost continual agitation. First the power came into the hands of the Taira, then of the Minamoto. Before, however, we relate the circumstances in detail it will be well to exhibit in chronological order the chief stages in the introductory history.

During the period from the 62nd to the 74th Mikado (947-1108) the influence of the Fujiwara continues still. In all court intrigues and changes of sovereign their hand is at work and is particularly active whenever a Mikado is endeavouring to rise above the level and to free himself from the hampering fetters of tutelage, in order as a free ruler to hold direct intercourse with his people and to learn their true position and requirements. Thus it was in the case of the well-meaning 62nd sovereign, Murakami-Tennô, and

especially of the 71st, Go-Sanjô-Tennô, whose intelligence and energy were very unwelcome to the Fujiwara. After a reign of only three years, his abdication—according to another account, his early death—put an end to the hopes which the people had placed upon him.

Of the remarkable occurrences in this period we may further mention the mission of the bonze Tônen to China, an irruption of the Coreans into Kiushiu, insurrections of the Emishi and Japanese in Mutsu, and the increased power and insolence of the bonzes of Hiye-san.

Tônen, a Fujiwara, belonged to the convent of Hiye-san. Provided with presents from his court (some bronze vases and a sketch of Japanese History) for the Emperor of China, this learned priest betook himself in 984, in the reign of the 64th Mikado, to Peking to make a lengthened stay. In the year 984 he returned, died in 1016, and was then deified as Kôji-Daishi. The historical work mentioned was translated by Matuanlin into Chinese.

The irruption of the Coreans into Kiushiu occurred in the time of the 67th Mikado (1012-1017). The Kuwambaku sent a Minamoto and a Taira against the foe. They succeeded in completely routing the Coreans and compelling them to retire. In various other affairs also generals belonging to the Minamoto and Taira families still proved themselves the obedient instruments of the Fujiwara, with whom they became, moreover, frequently connected by matrimonial ties.

Among the most famous achievements of the Minamoto are the expeditions of Minamoto-Yoriyoshi against the rebels in the north of Hondo. There, in the province of Mutsu, Emishi and Japanese, had revolted under the leadership of Abe Yoritoki, in the time of the 70th Mikado, about the middle of the 11th century, and had spread insurrection far and wide. Yoriyoshi was nominated Shôgun and sent to crush the rebellion. He and his son Sadasumi, established peace and were highly honoured in consequence. Under Horikawa-Tennô, the 73rd Mikado (1087-1107), a fresh insurrection broke out in Mutsu, in the suppression of which the aged Minamoto-Yoriyoshi again took part. This time, however, the main share of the glory in the three years conflict fell to his son Yoshiie, who was at that time acting as governor of the northern provinces. Yoshiie displayed upon this occasion remarkable bravery, and as, moreover, he was a great favourite with his army, he received the appellation of Hachiman-Taro¹ (first-born son of Hachiman, the Japanese Mars: see also p. 93), and like his father was nominated Shôgun. A brother of his,

¹ Another and more credible explanation is that Yoriyoshi, desiring to have a son, prayed to the god Hachiman, and his prayer having been answered, marked his gratitude by calling his son after the god, Hachiman-Taro. When his son came to man's estate, he was renamed Yoshiie.

called Yoshikuni, as soon as he was born was nominated Lord of Ashikaga in Shimotsuke, from which his descendants received the name of Ashikaga.

The Buddhist monasteries, especially those of Hiye-san, had gradually developed great power, and repeatedly bade defiance to the laws and regulations of the government. Under Shirakawa-Tennô, the pious 72nd Mikado (1075-1086), who exhibited, moreover, great independence of the Fujiwara, the corruption and arrogance of these priests of Hiye-san reached such a height, that they not only had recourse to arms in their controversies with other monasteries and sects, but even marched well-armed into the capital, in order to enforce attention from the government to their demands. "There are three things," Shirakawa is reported to have said, "over which I have no power: the waters of the Kamogawa, the dice at play, and the priests."

Shirakawa resigned the throne to his son Horikawa, a boy of eight years old, but continued in reality to direct the destinies of the country for another fifteen years. To Horikawa succeeded from (1108-1123) his son Toba-Tennô, as 74th Mikado. He was at that time a child of five years old, and was only twenty years of age when he followed the ruinous example of his ancestors by abdicating.

With the beginning of the 12th century feudalism and military despotism come to the front. The Fujiwara have now only a shadow of influence at court and none at all in the provinces. An old Japanese historian compares the authority of the Mikado at this period to an empty cash box, of which the Fujiwara carried the key. The governmental system borrowed from the Chinese, with its elaborate court etiquette and its army of officials, has outlived itself. Where once court-intrigue decided everything and brought about changes of government, from henceforth the sword decides, which the leaders of armies turn against each other, while the Mikado remains entirely in the background of political events. For five centuries the conflicts for the possession of the *de facto* power are continued and devastate the country. The humble peasant has to pay the reckoning. Ravaged fields, oppression and harsh usage and universal poverty are the reward of his industry.

The Emperor Toba forbade the Samurai in several provinces to make themselves vassals of the Minamoto and the Taira. It was a struggle with the wind. The feudal system had gradually so developed and strengthened itself, that such authority as was represented in Kiôto, could no longer impose upon the adherents of the Minamoto and Taira. The rivalry of the two houses grew with their sense of self-sufficiency and independence. Not from loyalty, but in order to lend a legal form to their own efforts for the mastery, now the one party and now the other obeyed the commands of the court, only to employ them against their opponents.

It was not long before the storm burst over the heads of the ruling house and their army of officials, and the long impending conflict raged between the Taira and Minamoto for the supreme power. In Japanese history it bears the name of Gen-Pei-Kassen.¹ The wars of the Guelphs and Ghibellines, of the Red and White Roses, and other remarkable civil wars, appear short compared with this bitter feud of the Japanese Middle Ages, which lasted for centuries. Their history is familiar to every Japanese. With them are associated reminiscences of the greatest disorders, the most exciting events, and the bloodiest conflicts that ever occurred in Japan. Besides the display of great courage and a really admirable heroism, the basest conceivable means, such as cunning, long-prepared revenge and assassination were not despised as means to destroy a dangerous rival or hated opponent. This struggle² for supremacy in feudal power has been described in numerous historical novels; and there is also a special history of the Taira, called *Heike Monogatari*.³ In what follows we will present a brief account of its course.

When Shirakawa retired from Kiôto in the year 1073, in order to carry on from the monastery, with greater freedom and independence of the Fujiwara, the government which he had formally handed over to his son Horikawa-Tennô, there was in his body-guard a brave young officer, named Taira-no-Tadamori, whom he favoured highly, and who by this means, despite many enemies at court, soon attained to an important position in the state. The result of his too intimate relations with one of the concubines of his master was a son, named Kiyomori (1118). The corruption of the court was so great that this event shocked nobody. Tadamori even remained in favour with the ostentatious and dissolute Toba-Tennô. In the reign of his successor, Shutoku-Tennô (1124-1141), Corean pirates ravaged the coasts of Kiushiu and Shikoku. Tadamori received the commission to put an end to this state of things, and acquitted himself of the task with much success. Somewhere about the same time, at Kiôto, the Minamoto Tameyoshi had to repel a fresh armed irruption of the priests of Hiye-san.

At 20 years of age Shutoku-Tennô, in accordance with the prevailing custom, was deposed, and like his father Toba, entered a convent, to make room for a step-brother, Toshihito, three years

¹ The name Gen-Pei-Kassen comes from the Chinese words Gen or Genji, "source" (Jap. Minamoto), Hei (Pei) or Heika, "peace" (Jap. Taira) and Kassen, "conflict, or duel." The chief conflicts fall in the second half of the 12th century.

² Several Minamoto distinguished themselves in it by great bravery and won the victory. The Japanese youth were enthusiastic in their favour. When, as frequently happened, in the military games of the young Samurai the Gen-Pei-Kassen was represented, each wished to be "Minamoto," and nobody a "Taira," so that the sides had to be determined by lot.

³ Translated into French by F. Turretini, of Geneva, under the title of "*l'Histoire des Taira*."

of age, whom his intriguing and coquettish mother (daughter of a Fujiwara) wished to see upon the throne. Under the name of Konoye-Tennô, he occupied the throne from 1142 to 1150 as 76th Mikado. In the first year of his reign a great comet (*hôkiboshi* or *besom star*) appeared in the sky. Everybody interpreted this as the sign of a great approaching war, which wiser observers had already upon other grounds reason to fear. At 17 years of age the Emperor suddenly died, and just as unexpectedly six years later died his weak father, Toba. The play of intrigue and the controversy as to the succession to the throne, for which no less than three candidates, minor children or grandchildren of Toba, were proposed, were soon in full course. Shutoku-Tennô came forward and claimed the inheritance for himself and his son. A Fujiwara, the Sa-Daijin Yorinaga, a younger brother of the Kuwambaku Tadamitsu, and almost all the Minamoto under the leadership of Tameyoshi, besides a Taira called Tadamasa, supported his pretensions. The opposing parties combined, and under the leadership of the Kuwambaku quickly made one of the numerous sons of Toba emperor. Under the name which he took later of Go-Shirakawa-Tennô (Shirakawa II.), he exercised for three years (1156-1159) the imaginary power. On his side stood besides Tadamitsu, the Kuwambaku, almost all the Taira. A capable general was still wanting; whereupon Taira Kiyomori, the Bastard, a man of 38 years of age, offered his services to the new emperor. Although he had not as yet particularly distinguished himself, they were accepted, for he had inherited all the offices and dignities of his father, and with them the headship of his family. But, besides this, he produced an impression by his tall, powerful figure and excellent intellectual gifts, for he was wise and sagacious in counsel, bold and courageous in action. His two sons, Shigemori and Munemori, stood bravely by his side, and also Minamoto-Yoshitomo, brother of Tameyoshi. As early as eleven days after the death of Toba, a battle took place between the two parties. Both sides fought bravely, but Kiyomori remained victor. Yorinaga, when he saw that it was all over with him, committed suicide; but the ex-emperor Shutoku was taken prisoner and banished to Shikoku, and the Minamoto Tameyoshi to Idzu.¹ Kiyomori

¹ Yoshitomo was the eldest and Tametomo the eighth son of Minamoto Tameyoshi. Though he sided in battle with the victorious Kiyomori, the nobler feelings of Yoshitomo were grievously hurt soon afterwards when he perceived the cruel treatment of his brother and kinsmen by Kiyomori, who proved to be the implacable enemy of his family. Tametomo was the most famous archer of his time and, as such, his picture was chosen to decorate the Kinsatsu (paper money) of Japan some ten years ago. Having been made prisoner, the Emperor Go-Shirakawa, instigated by Kiyomori, treated him most cruelly, and by way of insult sent him to Hachijô-ga-shima in the south-east of Idzu. Tametomo is said to have afterwards succeeded in reaching the Riukiu Islands, where he married and acquired great influence. The first historical king of this group of islands, Sunten, is regarded as his son.

mori was now master of the situation. Very soon, as Daijō-Daijin, he had reached the highest position possible for him in the state, and governed without troubling himself about the nominal rulers of the country or the Kuwambaku. The power, which partly by his bravery, partly by murder and other censurable means, he had conquered for himself and his house, and now attempted to retain, was only of brief duration. He made and deposed Mikados at his own will,¹ and gave himself up to a nepotism, which might well vie with that of the Fujiwara. Friendly and generous to his friends, he was cruel and unrelenting to his enemies, and suspicious of all who could offer any opposition to his unbounded ambition. Among these were especially the Minamoto. Yoshitomo, the only one among them who had hitherto stood by Kiyomori, when he saw with what lust of power and implacable cruelty Kiyomori acted towards many members of his family, now likewise turned away from him. Since the banishment of his brother Tametomo he was the head of the Minamoto, all of whom he now collected against their declared enemy. He also secretly allied himself with the Fujiwara for the overthrow of the tyrant. Kiyomori anticipated him. With his two sons and his followers he fell suddenly upon the enemy and completely crushed him. These events took place in 1159 within the gates of Kiōto. Yoshitomo took refuge in flight, but was murdered in Owari in the bath by a vassal corrupted by Kiyomori. Shigemori, the eldest son of the dictator, could now alone control the tyrannical caprices of his father. He felt painfully his father's growing unpopularity. He died two years before him, in 1179. Then the ex-Mikado, Go-Shirakawa, son-in-law of Kiyomori, was banished because he had an understanding with the foe, while the Minamoto were to be totally annihilated. It was not long before Kiyomori began to carry out this determination, and caused to be murdered whoever of the family fell into his hands.

Yoshitomo left behind him a numerous progeny. Of the seven sons born in legitimate wedlock, three had already been dragged before Kiyomori from their hiding-places and been put to death, while the same fate threatened a fourth. This was the third in order of birth, called Yoritomo, and at that time a boy of thirteen years old. The sons of the tyrant took pity upon him, saved him from the decapitation to which he was already condemned, secured the intercession of the influential mother-in-law of Kiyomori, and in this way caused the young Minamoto to be banished to the inland village of Hiru-ga-kojima in the south of Idzu. There he was consigned to two devoted vassals of the Taira, called Itō-Sukechika and Hōjō-Tokimasa, to be rigorously guarded.

¹ The best illustration of the state of things is probably furnished by Rokujō-Tennō, the 79th Mikado (1166-1168), whom Kiyomori made to succeed his father, Nijō-Tennō, at two years old, and deposed at five years old.

Besides his sons by a first marriage, Yoshitomo had also left three others, who had been borne to him by Tokiwa, his concubine.¹ She came from a peasant family. She was distinguished by great beauty, and was at the same time a good mother and faithful wife. In order to save herself and her children she fled with them without knowing whither. This flight became one of the favourite subjects of Japanese painters. Tokiwa is represented with a babe, called Yoshitsune, at her breast, and holding its two older brothers by the hand, hurrying barefoot across the fields, while around her the snow flakes are falling to the earth. Thus wandering, worn out by hunger and frozen with cold, she meets one of the soldiers of her foe, who is moved by her condition and that of her children, and at the risk of bringing destruction upon himself, in pity offers them shelter and food. Here she learns that Kiyomori, hoping thus to get possession of the daughter, has cast her mother into prison in Kiôto. What shall she do now? Her first duty as a daughter bids her hasten thither and try to liberate her mother, yet this will probably bring ruin upon her own children. There remains but one means and one hope, namely, to present herself before the tyrant, to move him by her beauty, and thus to obtain grace for her mother and her children. Accordingly she hastens to Kiôto and purchases the life of her mother and children by sacrificing her own liberty to her husband's foe. Her children are taken from her and sent separately to different monasteries. Yoshitsune, the youngest, was sent to Kurama, lying six miles to the north of Kiôto and girdled by wooded mountains. He grew up here into a peculiar youth. His sense of liberty and self-will were ill suited to the monastic life, and the Ushi-waka (young ox), as they called him was with difficulty subdued. To wander in the solitude of the wood and in the darkness of night was his joy. Only one wish animated him—to become a famous hero. This was fulfilled beyond all measure. In the forest near Kurama is still shown the giant Sugi (*Cryptomeria*), where Yoshitsune one night met the goblin (*Tengu*), who became his friend and taught him how to fight. The tree measures over six metres in circumference, is enclosed by a hedge, and known as Ô-sugi. The history of Kurama-yama, which is rich in legend, relates many other reminiscences of that period.

When Yoshitsune had grown up into a stalwart youth, rumours reached his ears of conflicts far away in Mutsu between the adherents of his family and the Taira. He was no longer content to stay in monastic solitude; he wished to hasten hither and take his share in the conflict. He confided to a gold-merchant from Kiôto, named Yorishige, who frequently visited Kurama-yama and had become intimate with him, his wish to escape secretly, and

¹ Concubines in Japan had a legally recognised position, and their children had the same rights as those born in wedlock.

begged him for his assistance. By a circuitous route both reached Kadzusa. Here he first displayed his bravery and his wonderful dexterity in battle with much-dreaded robbers. Yet his friend urged him to wander with him further north, and out of the immediate reach of his foes. Thus they came at last to Mutsu, to a Fujiwara called Hidehira, who received him well. Here until his twenty-first year he spent the time in military exercises, in the chase and other manly pastimes, and gained for himself far and wide the reputation of a brave knight, as perfect as any the Japanese Samurai could conceive.

Yoritomo, the brother of Yoshitsune, and his senior by twelve years, had married Masago, the daughter of his guardian and inspector Hôjô Tokimasa in Idzu, and had confidentially communicated to him all his plans to avenge his father and to free the country from the Taira. Though his first effort failed, yet it clearly proved him to be the leader of his family and of all opponents of Kiyomori. After a brief concealment in the Hakone mountains he embarked for the peninsula of Awa, revealed himself to the Lord of the Kuwantô, and speedily collected sympathizers in great numbers, who hastened from every side to the white standard of the Minamoto. Hereupon he marched across the Sumida-gawa to Kamakura, which he chose as his abode, and fortified. The army of the Taira marched beneath its red standard to meet him. Where the Tokaidô passes over the Fuji-kawa, the enemies met. The Taira drew up in line on the right bank, the Minamoto opposite them on the left. Contrary to all expectation, however, the latter retired again southwards and the decisive battle between the two parties was delayed.

Shortly afterwards Kiyomori died in his palace at Fukuwara, which he had had built where now the modern Kôbe stands, and had furnished with all imaginable luxury. That he had not succeeded in exterminating the Minamoto, tormented him even upon his death-bed. "Do not celebrate for me, if I die," he is reported to have said, "the usual Buddhist ceremonies, and have no liturgies read for me; only strike off Minamoto-no-Yoritomo's head and place it before my grave. May all my descendants take this wish to heart and be careful not to forget it."

The inheritance which Taira-no-Kiyomori transmitted to his surviving son Munemori was no enviable one. The family had made themselves hated throughout the country by their cruel oppression and persecution of all opponents, as well as by their striving after luxury and riches. Shigemori, the only one of them to whom any sympathy had been extended, had been two years in his grave. With his death and that of his father, the fortunes of the Taira began their rapid downward course, for from this time the party was without the head which guided it and kept it together, a task to which Munemori was not equal. He summoned the great dignitaries to meet at Kiôto, and consulted with them

upon the situation. They recognised its seriousness and advised an attempt at reconciliation with their opponents. But Munemori, with the last exhortation of his father ringing in his ears, could not and dared not undertake it. Thus matters came to a decisive conflict.

A year before Kiyomori's death, Mochihito, the second son of the dissolute ex-Mikado, Go-Shirakawa, who was kept as a prisoner at Fukuwara, had formed an alliance with Yoritomo for the overthrow of the Taira; the bonzes of Hiye-san likewise openly espoused the party of the Genji. Three armies were at their disposal, and were now advancing irresistibly towards the south—the army of the Kuwantô, led by Yoritomo himself, the army of Mutsu under Yoshitsune, and the army on the Nakasendô in Shinano, where a cousin of theirs named Yoshinaka held the chief command. The latter is the first to come to the front.

Minamoto-no-Yoshinaka or Kiso-Yoshinaka had, like many another Minamoto, early lost his father by the hand of the Taira. When he grew up to manhood, he established himself, with his relatives and vassals, in the magnificent valley of the upper Kiso-gawa, which is crossed by the Nakasendô. Like the old German knights, they built their castles on the summits of steep and almost inaccessible mountains. On the Yatate-yama, some 1,300 metres high, dwelt Yoshinaka himself; on the almost equally lofty Hiyakkinawa, a brave relative, Imai Kanehira, and on Yabune, 1,900 metres high, one of his bravest and most famous vassals, Higuchi-Tiro. As the decisive battle in the Gen-Pei-Kassen drew nearer, he formed here, in concert with Yoritomo, a brave army, with which he now, supported by his uncle Yukiye, the youngest brother of Yoshitomo, advanced along the Nakasendô towards Kiôto. The army which Munemori sent against him was totally defeated in 1182. At the news of the defeat, Munemori fled with all the members of his family, carrying with them the young (81st) Mikado Antoku and the imperial insignia, to Yashima in Sanuki, leaving behind, however, the two ex-emperors Go-Shirakawa and Takakura in Kiôto. Go-Shirakawa, who had in the interim arranged a kind of provisional government, greeted the conqueror on his entry as a liberator, and as a reward heaped official titles upon him. Antoku was dethroned, and his younger brother, Go-Toba-Tennô (Toba II.), was made Mikado (1188–1198).

Yoshinaka, however, was far from playing the part of a humble servant, and surrendering the power which he had once secured. His arrogance was intolerable. Causing himself to be nominated Sei-i-tai-Shôgun,¹ he took up a hostile attitude towards Yoritomo, who during all these events had remained in Kamakura, which

¹ From sei, "to subject"; i, "strangers" (barbarians); tai, "great"; shôgun, "over-general" (taishô, great general). Tai-Shôgun has been frequently corrupted by Europeans into Taikun (Tycoon). Gun means "army, war"; shô, "general," and Shôgun therefore "commander-in-chief."

he had extended, to serve as his residence. After Go-Shirakawa had failed in an attempt to get rid of the burdensome Yoshinaka by poison, he turned for aid to Yoritomo. He sent his younger brothers, Yoshitsune and Noriyori, at the head of an army, to Kiôto. Yoshinaka marched to meet his relatives, was defeated by Yoshitsune near Seta-no-Karahashi at the outlet of Lake Biwa, and thereupon committed suicide (1184).

Yoshitsune now turned against Munemori, and after razing to the ground the palace of the Taira at Fukuwara, crossed over to Sanuki. Here he defeated the Taira and burnt their castle at Yashima. Munemori had barely time to escape. With Antoku-Tennô, whom the widow of Kiyomori held in her arms, he embarked for Kiushiu. The last despairing struggle took place upon the sea, at Dan-no-ura, in the neighbourhood of Shimonoseki (1185). The adherents of the Taira from Chiugoku had gathered here, in order to cross, with their leader, their wives, parents and infants, in more than five hundred ships to Kiushiu. Yoshitsune came after them like the wind. In the hot conflict which ensued, most of his opponents were struck down. Only a small portion of them escaped to Higo, where to the present day the inhabitants of some mountain-villages are regarded as descendants of these Taira fugitives. The widow of Kiyomori, since his death a nun under the name of Nii-no-ama, sprang into the sea with Antoku-Tennô, a child of five years old, and was drowned. Many of those whom the arrows of the Genji had not reached, put an end to their lives, though indeed a better fate would hardly have awaited them at the hands of their enemies. The extermination which Kiyomori had destined for the Minamoto was now turned by them everywhere against the Taira. Neither age nor sex was spared, and those who could not die sword in hand, were mostly doomed to perish in some other way.¹

Munemori and one of his sons were made prisoners, conducted before Yoritomo at Kamakura, and later beheaded at Shinowara on the Nakasendô.²

It is recorded that Yoritomo had associated with his brother Yoshitsune, in his conflicts against the Taira, as a kind of chief of the staff, a certain Kajiware, whose suggestions the commander of the

¹ According to Dickson, many of the Taira women who were left behind in Dan-no-ura (Shimonoseki) were driven by poverty to prostitution, and in this position were allowed certain privileges, which have been continued to their successors down to modern times.

² The statement in Dickson, that he fled after the battle at Dan-no-ura to Tsushima, and that this island remained until the restoration in the possession of his descendants, certainly rests upon an error. Tsushima was given by Shirakawa-Tennô to his favourite Taira-no-Tadamori, as a mark of recognition of the good service which the Taira-Shôguns had rendered the reigning house as military governors of the southern and south-western provinces. If the Tsô, the Daimio-family of Tsushima, was really of Taira descent, it must date back to a younger son of Tadamori and not to Munemori.

army had not followed, but had fought and conquered after a plan of his own. Hurt and embittered by this, Kajiware did everything to throw suspicion and calumny in Kamakura upon the hero of the day. It may well be supposed that Hôjô-Tokimasa also made a bad use in this direction of his great influence with Yoritomo, and succeeded in increasing his distrust of Yoshitsune. As the latter, therefore, after the battle at Dan-no-ura, was marching to Kamakura, to lay the trophies of victory before his brother and the head of his family, his brother forbade him to enter the town, and compelled him to remain in the neighbourhood, in the village of Koshigoye which lies opposite to Enoshima. The moving letter which Yoshitsune wrote from here to Yoritomo, in which he reminds him of all the toils and hardships which he had endured on his behalf, and pathetically implores him to cease his distrust of him and to free him from calumny, a model of brotherly love and frankness, is still extant. Other influences overpowered his voice; Yoshitsune was obliged, after waiting long in vain, to withdraw to Kiôto where he was chief commander, without having seen his brother.

Yoshitsune's fame outshone everything. His great personal bravery and dexterity, and his unusual military success, were in every one's mouth. His early life and his subsequent flight from Kurama were dressed out with fables, and his deeds were made the themes of song. The great enthusiasm of the Japanese for the house of Minamoto was directed specially towards him and his famous ancestor Hachiman-Tarô. He is the Knight without Fear and without Reproach, whose name and deeds henceforward until modern times are held up as examples to enterprising youth. In the whole country there was no Samurai boy who did not know his history, and whose heart would not have beat higher at hearing it.

When Yoritomo saw the fame and great popularity which his younger brother enjoyed, his breast was filled with envy and with anxiety lest, like Yoshinaka, he should use his influential position against him, and he cast about how to get rid of Yoshitsune. After his attempt to have him assassinated had failed, and Yoshitsune had fled from Kiôto, he denounced him, on some imaginary pretext, as a traitor, and sent special emissaries into every province in order to have him arrested. This was done on the advice of Ôye-Hirotomo, the President of the Council of State which he had established, who combined with it the ulterior object of creating a permanent institution to maintain a better control over the country. Henceforth these emissaries, who bore the title of Shiugu (Protectors), formed the military governors of the provinces, who had to share the administration with the Kokushiu, or civil governors, and, in a certain sense, to keep watch over them.

Again Yoshitsune sought and found an asylum with his old friend Fujiwara Hidehira, the governor of Mutsu. Upon his death, however, soon afterwards, his cowardly son Yasuhira allowed

the guest, then only 30 years of age, to be assassinated, in order to gain Yoritomo's favour and pardon for his father's having, with his knowledge, given a reception and shelter to Yoshitsune. Yoritomo, to whom this was very welcome, pretended to be indignant, and marched with an army northwards in order to punish Yasuhira. After this had been done, Yoritomo made preparations for a visit from Kamakura to Kiôto.

According to another account, Yoshitsune, on seeing that there was no hope of safety left, took his own life. There is also a legend, according to which he escaped with his faithful servant Benkei, from Mutsu to Yezo, and finally to the Asiatic continent, where he died.

Benkei,¹ the giant Goliath of the Japanese, was a very adroit and crafty character. Originally a dreaded robber and assassin, he became later the devoted servant of Minamoto Yoshitsune, whom he accompanied on his victorious expeditions as well as in his flight from Yoritomo. On a bridge at Kiôto, where he had previously been wont to rob and murder the passers-by, Yoshitsune once found him, and was the only man who was a match for him. In the struggle which took place on this occasion he became acquainted with the imposing strength and adroitness of his adversary, gave in his submission, and ever afterwards followed him.

Many stories of Benkei-san's strength and craftiness are current among the people, and he is a favourite figure for the decoration of painted kites. When in his flight with Yoshitsune he crossed the Hakone Pass, the two had disguised themselves as wandering Buddhist priests of the sect of the Yamabushi. The Genji soldier, who was upon guard, addressed them, whereupon Benkei, speculating upon his inability to read, drew out with great dignity a roll of blank paper, and after he had pressed it reverentially to his forehead,² in the choicest and most pious language improvised the contents of a letter, which was supposed to have been written by the high priest of the Hokoji temple in Kiôto, and by which he authorised them to collect contributions towards the casting of a great bell. On the first mention of the name of the priest so famous and so highly revered throughout the country, the sentry, it is said, fell respectfully upon his knees and listened, face bent to the earth in respectful awe, to the contents of the letter. In

¹ Or Benkei-san (pronounce Bénké-san) as he is commonly called in the popular speech, with the affix for Sir.

² This fashion of honouring the letter of a prince or of a high priest regarded with great respect, seems to be widely spread among Orientals, from the Pacific to the Atlantic Ocean. On our journey in Morocco in 1872, my friend, Professor von Fritsch, of Halle, and I, had the opportunity of observing similar customs. Thus the Cadi of Mogador, after opening a letter recommending us, written and sealed by the Sultan, pressed it to his forehead and kissed the seal, before he read it.

order to put an end to any suspicion, Benkei begged the sentinel to excuse the improper behaviour of his servant, who had meantime remained standing, observing that he was still a great boor who had only just come from the rice-field. Then he gave the servant a blow, and told him to fall at once upon his marrow-bones, and not to presume again to remain standing in the presence of a Samurai and a soldier. The trick succeeded completely, and they passed unhindered through the strictly guarded gate.

In the Gokinai are shown many things associated with reminiscences of Benkei's great strength. He is supposed to have cooked his rice in very ancient, enormous iron boilers, weighing over a hundredweight, such as may be seen not far from Kiôto and Yoshino; he is also fabled to have moved rocks, enormously heavy bells and other things.

In 1190 Yoritomo proceeded with a large retinue and in great state from Kamakura to Kiôto, to present himself before the reigning and the retired Mikado. Everybody, and especially the court, was astonished at the magnificence of the procession and the great wealth that he contrived to exhibit on this occasion. He was now the premier subject and, what was more, he possessed in fact, if not in form, a greater power than even Kiyomori himself had ever exercised. No wonder that a brilliant reception was accorded him. Valuable presents were exchanged, some of which are still shown in Kiôto and Kamakura by priests of the temples, to which they afterwards found their way. Fresh festivities and entertainments followed each other day after day. This continued for an entire month, and then Yoritomo, having had high civil and military rank conferred upon him by the court, returned to his residence, Kamakura. This place, which was founded by the famous Kamatari, a short day's journey to the west of Yokohama, on the Bay of Sagami, speedily became the wealthiest and, next to Kiôto, the most important town in Japan. Several temples, some old Ginkgo-trees, cryptomerias and Biaku-shin (*Juniperus chinensis*), and the celebrated Daibutsu of Kamakura are now the only relics left to indicate the extent and power which were developed by this abode, first of the Minamoto and later of the Hôjô.

In 1192 the ex-emperor Go-Shirakawa died at the age of 67 years. None of the Mikados lived through a period of greater change, or one marked by greater corruption and degradation of the court. Born and bred in the prevailing depravity, and in every respect a product of it, he was condemned to see his parents and many of his relatives, children and children's children, ruined by it, and himself more than once in peril of a violent death; and though when his end came he saw the country in peace, it was a peace which he and his family had not brought about, nor were able to preserve. Immediately upon his death the 82nd Mikado, Go-Toba-Tennô, sent a high dignitary of the court to Kamakura, to invest Yoritomo with the chief military dignity, that of a Sei-

i-tai-Shôgun, which from this time forward became hereditary in the Minamoto family.

The title of Shôgun now received a new and higher significance. Earlier it was a common designation of generals, and in this sense we hear of the Taira-Shôguns of the south and west; from this time, however, the nature of the dignity was changed, and, upon its becoming hereditary, the dualism in the state assumed a fixed and permanent form. Henceforth the Shôguns were in point of form the first vassals, but in fact the real rulers of the country.

The feudal system, which had been slowly developing itself for some centuries, received its systematic shape through Yoritomo, so that by many he is regarded as its founder.

Yoritomo visited Kiôto for the second time in 1195, and died at Kamakura in consequence of a fall from his horse, in 1199. On a mound not far from the great temple is shown his simple tomb. During the last ten years of his power the country, in the enjoyment of civil peace and good laws, had recovered from the calamities of war and was in a state of renewed prosperity. This was chiefly due to Yoritomo, and for this reason he is regarded as one of the greatest men of Japanese history.

He was a man of no imposing figure, but brave, imperturbably calm, and of great energy, in general also just and ready to punish the evil doer without pity, and to reward merit where he found it. With all these praiseworthy qualities, however, he combined great selfishness, suspicion and cruelty. He did much for the elevation of the working class and the improvement of agriculture, and to establish a sense of justice and personal security. To his influence it is chiefly due that many a desert strip in the Kuwantô and throughout the Tokaidô was peopled and turned into flourishing ricefields. By the imposition of a general tax of about 2 per cent. on agricultural produce, as also by constituting a tribunal to hear and determine complaints, he put an end to arbitrariness. He forbade the priests to carry arms or to take armed men into their service.

To the court at Kiôto Yoritomo always showed great consideration, and never omitted to obtain the sanction of the Mikado, which was of course not refused, for all his innovations. Thus he procured his consent to the appointment of five governors of the provinces, whose offices were to be hereditary, and with which he rewarded five members of his own family. His father-in-law became military governor of Kiôto, and for many other Hôjô lucrative and important posts were found. What, however, distinguished him in all this from his earlier opponent, Kiyomori, was that he did not suffer the country to be exhausted in this way, but protected the people and promoted their welfare.

The memory of his treatment of his nearest relatives, to whom he was at the same time indebted for all his power, casts a dark shadow across the picture of this otherwise great man. Only abominable ingratitude and great heartlessness could have allowed

calumniators to exert the influence which led him to refuse to spare not only Yoshinaka, but even his own brothers Yoshitsune and Noriyori, when he believed that they might prove dangerous to him. The murder of his brothers was bitterly avenged on his children and children's children, who one after another died unnatural deaths, prepared for them by the ambition of their maternal relatives. It must be regarded as a great error in his system of government, that he favoured his own house of the Minamoto less than the family of his father-in-law, Hôjô Tokimasa, to whom he was indeed indebted for his life, yet whose influence became extremely fatal, not only to the Minamoto in general, but also to his own descendants.

THIRD PERIOD.

FROM YORITOMO'S DEATH TO THE DYNASTY OF THE ASHIKAGA
(1199-1334 A.D.). AGE OF THE SHADOW-SHÔGUNS, OF THE
POWER AND FALL OF THE HÔJÔ FAMILY.

YORITOMO was only fifty-three years old when he died. The inheritance fell to his son Yoriie, who was then eighteen years old. But "taishô tane ga nashi,"¹ a great man is rarely succeeded by a brilliant son, says the Japanese proverb. Yoriie, except in strength of body, was unlike his father; for he thought only of his pleasures, surrounded himself with loose women and libertine cavaliers, and exhibited neither talent nor inclination for the more serious duties of life and of his position.

But he was encouraged in his dissolute inclinations by Hiki Yoshikazu, his own father-in-law, while his ambitious grandfather likewise looked upon this course of life without dissatisfaction. Masago, Yoriie's mother, had, agreeably to the custom of that age, after Yoritomo's death, become a nun. This, however, did not hinder the acute and sagacious woman from taking the most active part in political affairs. Thus, at her instigation, a family council was formed of the chief friends of her husband, under the presidency of her father, Hôjô Tokimasa, of which body Oye Hiromoto and Miura Yoshinobu were members,² in order to consider by what means a check could best be placed upon the dissolute habits of Yoriie. It was proposed to him, that he should give up the administration of the eastern provinces to his younger brother Sanetomo, that of the western to his son Ichiman. As the former, however, was only twelve years old, and the latter was still in swaddling clothes, this was simply to give up the

¹ Literally, "A general begets no offspring."

² The respected family of the Miura had always stood faithfully by the Minamoto, and again upon Yoritomo's landing in Awa, were among the first to gather around the white flag.

government to the Hôjô. Yoshikazu dissuaded his son-in-law from agreeing to the proposal, and plotted a conspiracy, by which Yoriie was to rid himself of the Hôjô, and then make his son his successor. Tokimasa defeated his opponents, and then, without any hesitation, had not only Yoshikazu, but also his own grandson, Ichiman, put to death (1203). Yoriie, moreover, was deposed, banished to Idzu, and then likewise secretly put to death. Sanetomo was made his successor (1203). Thus the Hôjô family attained to the summit of their power, having in point of fact the destinies of the country in their hands. The rôle, which earlier the Fujiwara, and then the Taira, had played so long at the court of Kiôto among women and minor children, was now undertaken by the Hôjô in Kamakura with respect to the heirs of Yoritomo and the Shôgunate, and in consequence also with respect to the court at Kiôto. They never felt scruples of any kind in the application of the most censurable means, and, indeed, in this respect outdid all their predecessors. The Shôguns were mere puppets; of the Shôgunate nothing was left but the name and the form, while the Hôjô, under the title of Shikken, governed the country, and, in their first members, developed a despotism which also threw that of the Taira far into the shade. This long period therefore, from 1199 to 1334, is justly styled the Age of the Puppet-Shôguns, or of the Regency of the House of Hôjô. Several of the twelve successive Shikken (Tokimasa, Yoshitoki, Yasutoki, Hirotoki, Tsunetoki, Tokiyori, Masatoki, Tokimune, Sadatoki, Morotoki, Takatoki and Moritoki) were doubtless able men, who rendered many great services to the country, yet the collective verdict which posterity has pronounced on the tyranny of the Hôjô is very unfavourable; the family is regarded by the Japanese with more dislike even than the Taira, from whom they descended. They thus likewise traced back their origin to the 50th Mikado, Kuwammu-Tennô, and called themselves Hôjô, from their ancestral home in Idzu, where one of their forefathers had settled.

Under the Hôjô, particularly the better of them, who held sway during the 13th century, the Buddhist monks in their monasteries, developed their greatest power. The efforts of various Shikken to break it and to confine the monks to literary and artistic occupations were in vain. The peace which the country enjoyed upon the whole, throughout the 13th century, and in consequence of which a renewed material and intellectual advance cannot fail to be observed, was broken from time to time by slight insurrections, which as a rule proceeded from them, but took no hold upon the people, and were easily suppressed.

When Yoriie, in 1204, was murdered in his bath, as was generally supposed at the instigation of his grandfather and of his own mother, his younger brother, who had succeeded to the Shôgunate under the name of Sanetomo, was only twelve years old, while of the two sons left by Yoriie, the elder, called Kugio, was

only five years of age. He was adopted by Sanetomo, who had him brought up in a monastery for the priesthood. Hôjô Tokimasa, now sixty-eight years of age, had at length, by his many abominable acts, completely exhausted the patience and the confidence of his daughter Masago. He was compelled to leave Kamakura (1205), and retired to Idzu into a monastery, where he lived eleven years longer as a shaven monk. (Such a monastic life had, however, nothing in common with the ascetic rules of many later Buddhist monasteries.) His son Yoshitoki succeeded him as Shikken. The immediate cause of Tokimasa's banishment was his attempt to replace Sanetomo by an infant son of a step-sister of Masago, whom he had given as a wife to a certain Hiraga Tomomasa. He had already procured from the Mikado permission for his grandson Hiraga to adopt the name of Minamoto, and seemed very likely to succeed in plotting away the inheritance of Yoritomo to quite a different family, when Masago, grieving at the thought that her second and only remaining son should lose his position, put an end to her father's intrigues. Hiraga Tomomasa was soon afterwards murdered, then his child died, as it was supposed, by no natural death, but at the will of Masago.

Sanetomo was by nature and education a weakling. Childish games and intercourse with women pleased him more than manly exertions, and he remained, therefore, immature in mind and will even when age and law entitled him to be independent. Yoshitoki was afraid nevertheless of losing his influence, and endeavoured to get rid of him. Murder was again the means employed, and the agent the priest Kugiô, the nephew of Sanetomo, who had meanwhile grown up to manhood. He had always looked upon Sanetomo as the murderer of his father, and considered it his supreme filial duty and the aim of his life to avenge him; in which he was secretly strengthened by Yoshitoki, although the latter could have told him that it was not Sanetomo, who was but twelve years old, but his grandfather Tokimasa, who had been the intellectual author of Yoshiie's assassination.

The details of the end of the Shôgun Sanetomo are recorded by Rai Sanyo in the *Nihon Gwai-shi*,¹ as follows :

Sanetomo had fixed upon the 27th January, 1219, at nine in the evening, as the time at which, in accordance with an old custom of his predecessors, he would betake himself to the Temple (of the war-god Hachiman) at Tsurugaoka, at which Kugiô was a priest, to perform his devotions. Before his departure from the palace, his old servant Hiroto came to him and said : " Until now, thy

¹ The historical work entitled *Nihon Gwai-shi* appeared in the year 1827. Its author had laboured at it for twenty years. It is the principal work upon the history of the military families of the Taira, Minamoto, Hôjô, Ashikaga, etc. The leading idea with which it was written is, that the Mikado is the true and legitimate ruler of the country, and the positions of the feudal lords with the Shôgun at their head are usurped.

servant has rarely shed tears, and now he is shedding them without knowing any reason for them. Fear fills thy servant's breast. When the departed taishô (great general, namely, Yoritomo) dedicated the Tôdaiji (a temple at Nara), he wore as a precaution a coat of mail under his clothes. I wish that thou, my prince, wouldest follow this example and not be too rash!" Minamoto no Nakaakira answered (instead of the Shôgun): "Daijin¹ and taishô can wear no coats of mail." Again Hiroto mo begged his master at least to perform the ceremony by day, to which Nakaakira replied: "To do it by lamp-light is the ancient custom." When Sanetomo was about to set out, he had his hair combed by Hada Kinuji, then drew one hair out and gave it him, saying, with a smile, "This I bequeath to thee." The high officers of state and an escort of a thousand men accompanied Sanetomo. Yoshitoki was also present, but as the procession entered the temple-court, he excused himself on the plea of indisposition, handed his sword to Nakaakira and went home. Then Sanetomo dismissed his whole escort and kept Nakaakira only with him. As he went down the steps, suddenly there sprang upon him and Nakaakira, from one side, a man with drawn sword, who cut off both their heads with two powerful blows, and then fled, taking the heads with him. It was in the darkness of night that this happened. The retinue was thrown into confusion, for no one knew who had done the deed. Then some one cried out with a loud voice: "Thus does the high priest of this temple avenge his father!" Then they knew that Kugiô had done it, and surrounded his house. He, however, kept Sanetomo's head in his hand, and betook himself immediately to the house of a certain Bitchiu, where he partook of food, without letting the head out of his hand. Now the youngest son of Miura Yoshimura was a pupil of Kugiô. He sent him to his father Yoshimura to ask for aid. Yoshimura, however, deceived him, sending word that he would come to meet him with troops, but informing Yoshitoki, who ordered Kugiô to be instantly dispatched. Upon this Yoshimura sent Nagao Sadakage to the spot at the head of five stout warriors. After Kugiô had waited a long time for the promised troops, he crossed the hill near the temple on his way to Yoshimura's house. Here the soldiers met him, and he bravely defended himself against them. Sadakage, however, struck off his head, with which he went to Yoshitoki. On the following day Sanetomo was buried without his head, which could not be found. Kugiô was nineteen, and Sanetomo twenty-eight years of age. Thus ended the main line of the Minamoto.

The only persons with whom Yoshitoki had still to reckon, were Masago in Kamakura, and Go-Toba (Toba II.) in Kiôto. The former was not willing to see all that now remained of the in-

¹ Sanetomo held from the Mikado the civil rank of U-daijin and the military rank of Shôgun or Taishô.

heritance of her husband, the Shôgun dignity, pass over to her male blood-relations, who had destroyed her own children and grandchildren. She begged therefore, and obtained from the ex-Mikado Go-Toba, that the son of the Sa-daijin, who was two years old, should be Shôgun, and formally exercised the regency for him until her death in 1225. This young "commander-in-chief, exterminator of the barbarians," was called Fujiwara-no-Yoritsune. The feeling of the whole court at Kiôto against the Hôjô in general, and against Yoshitoki in particular, was so great, that Toba II. finally determined if possible to rid himself of the tyrants. He proclaimed Yoshitoki a traitor to his country, and the murderer of the Minamoto, and summoned the people to arms against him. Yet where might is right, right has little might, says an English proverb. Only a weak undisciplined flock obeyed his summons; while soon an imposing army gathered around the standard of the Hôjô. Yoshitoki entrusted the chief command to his brother Tokifusa, and associated with him his own son Yasutoki (1221). Soon Tokifusa was master of Kiôto, and now Yoshitoki made the imperial family feel his power. The ex-Mikado Toba II. was banished to Oki, where he died in prison as an old man of sixty, in 1239. His son Tsuchimikado, likewise ex-Mikado, went into exile to Tosa, afterwards to Awa in Shikoku, and died there at the age of thirty-seven (1231), although he had taken no share in the attempts against the Hôjô, and had indeed used his dissuasions against them. Moreover, the third and youngest ex-Mikado, brother of the last-named, called Juntoku Tennô, was exiled to the Island of Sado, while the reigning (85th) Mikado, called Chukiô-Tennô, was deposed, and a relative set up in his stead, who appears in the annals under the posthumous name of Go-Horikawa-Tennô, 86th Mikado, from 1221 to 1232.

Yoshitoki banished also most of those who had made common cause with the imperial house, confiscated their fiefs and distributed them amongst his adherents, though he kept nothing for himself and his family. He made his brother military governor in Kiôto, and thus to a much greater extent than his father had the country altogether in his power. He died in 1225, a few months before his sister Masago, who was seventy years of age. Yasutoki, son of Yoshitoki, now, without any opposition, became Shikken, or regent of Japan. He was soon very popular, for with the talents of his father he combined love of justice, industry and frugality, so that his administration was advantageous to the country. Yoritomo was his model of administration. His laws and institutions were extended and completed by Yasutoki. He also patronized the arts and sciences, which for some centuries had been neglected and had retrograded. Repeated bad harvests and their widely felt consequence, a great famine, gave him an opportunity of showing his goodness of heart, and of helping to alleviate the distress of the poor so far as he could.

The bonzes of Kinai, particularly of the province of Yamato, meantime saw with discontent the steady growth of his reputation and influence, because this was detrimental to their own desire to obtain power. They told the peasants that the bad harvests and general famine were punishments from the gods for the sins of the Hôjô, and in particular for the banishment of the three ex-Mikados, and endeavoured to excite an insurrection amongst them, which they themselves headed with arms in their hands. In order to appease it, Go-Horikawa Tennô abdicated in 1232, and allowed his son, a child two years of age, to succeed to the throne, who according to the annals, as 87th Mikado, under the name of Shijô Tennô, nominally governed the country for ten years (1232-1242). Yasutoki had the rebels dispersed by a relative, but the outbreak found fresh support, when shortly afterwards the ex-Mikado died suddenly at the age of twenty-three years, since this also was ascribed to the Hôjô, and was represented as the punishment of the gods, who were angry that not the legitimate heir, but a relative of his and a favourite of the Hôjô, should occupy the throne. Nara was the seat of this renewed priestly insurrection. In order to put an end to it, Yasutoki suppressed the revenues of the monasteries, and he also attempted, by conducting the Shôgun Yoritsune with great pomp from Kamakura to Kiôto, that he might there do homage to the Mikado Shijô Tennô, to divert the attention of the people to other matters. Then he made the Shôgun travel through Yamato, to visit the rebellious monasteries, and to bestow liberal gifts upon them, with the view of winning them over to himself. In 1241, the young Mikado, though he was only eleven years old, was declared of age, and a relative of the Shôgun, of only nine years of age, was given him as a wife. A year afterwards the Mikado died suddenly, and now public opinion urgently demanded the return of the legitimate dynasty. A powerful party in Kiôto, among them the heads of the Fujiwara, wished to see Tadanari, the son of Juntoku, who had been banished to Sado, upon the throne; Yasutoki however opposed this desire and favoured the candidature of Kunihito, son of the 83rd Mikado, Tsuchimikado. He had fled on the banishment of the three ex-Mikados, had afterwards married a Minamoto, and had kept himself aloof from political activity. Supported by Akita Yoshikage, the envoy of the Shikken Yasutoki, he ascended the throne, which he occupied for four years (1242-1246), under the name of Go-Saga Tennô (Saga II.). Shortly afterwards Yasutoki died at the age of sixty. He was succeeded in the dignity of a Shikken by his grandson Tsunetoki, although Yoritsune had already reached his majority. Yoritsune was induced to resign the Shôgunate to his son Yoritsugu who was six years old, and to go into retirement. Yoritsugu adopted his mother's name of Minamoto (1244). He was made to marry early, and received his tutor's daughter, who was more than twice as old as himself, as a wife.

Saga II., the Mikado, was upon good terms with his protector, the

Shikken, and made him Lord of Musashi. He was the first Tennô who for a long period had ascended the throne as a man (twenty-seven years of age). But the custom that only minor children should occupy it had taken a firm hold, and thus even Saga II. obeyed it, abdicated in favour of his son Go-Fukakusa Tennô, had his head shaved, and became a monk (1246). The new Shikken Tsunetoki likewise retired a year afterwards. Neither in ability nor in energy can he be compared with his predecessor. He was succeeded by his younger brother Tokiyori. Soon after this change he died at the age of thirty-three. Tokiyori resembled his father in culture and strong sense of justice. Without regard to family rank he chose as officials people who by education, honesty and fidelity, gave guarantees for the proper administration of their offices. His chief judge, Awoto, was the terror of all evil-doers, whether high or low. The ex-Shôgun, Yoritsune, who, with two sons of Miura Yoshimura, had plotted a conspiracy to make Michitoki, a collateral member of the Hôjô family, dictator, was banished to Kiôto, while Michitoki was banished to Idzu. His two other opponents, Miura Yasumura and Michimura were pardoned by Tokiyori and allowed to remain in Kamakura. However, after they had treacherously plotted a new insurrection, and this had been suppressed, they had to perform the Harakiri upon themselves. Yet the ex-Shôgun Yositsune, even in Kiôto, did not cease from intrigues and conspiracies, and as he implicated his son in them also, the Shôgun Yoritsugu, the latter was dismissed and sent to Kiôto to his father (1252). The eighth son of Saga Tennô II., called Munetaka, then twelve years old, was named as his successor. Four years afterwards, Tokiyori, at the age of only thirty, resigned the regency in favour of his son Tokimune, who was six years old, became a monk, and as such travelled through the country incognito, in order to learn its necessities. He stayed with the peasants, contenting himself with their frugal fare, and whenever he found justifiable complaints against the administration, he did not neglect to repeat them to the tutor of his son, Hôjô Nagatoki. He died in 1263. The reputation which he left behind him was hardly inferior to that of his father Yasutoki.

When eight years old, Tokimune, his heir, was declared of age, though Nagatoki still continued to exercise the regency. A greater absurdity than was now exhibited by the complicated state-machinery of Japan is hardly conceivable. Here was Hôjô Tokimune the Shikken, an infant child under the guardianship of a relative, Nagatoki, called upon to guide the also immature, although much older, Shôgun Munetaka, while the latter in his turn had to direct the helm of the state and was supposed to represent the infant and powerless Mikado. This was (from 1260-1274) the 90th Mikado, called Kameyama Tennô, a younger brother of Go-Fukakusa Tennô, who had abdicated in his favour.

The Shôgun Munetaka was much devoted to Chinese learning,

and associated therefore a good deal with different priests, among them Riôki, Genye and others. Indignant at the unworthy part which he, the son of a Tennô, played with regard to the Shikken and his guardian, he engaged with these priests in a conspiracy, the object of which was to murder Nagatoki and the Shikken, as well as to deliver the country from the Hôjô. Nagatoki however anticipated them, Riôki was put to death, Genye fled to Kiôto, and Munetaka saved his life only through the intercession of his father, the ex-Mikado, Saga II., while he had to resign the Shôgunate to his son Koreyasu (1266), and retire to Kiôto. Nagatoki died soon afterwards, so that henceforth, until his death, Tokimune, as Shikken, represented the Hôjô without restraint.

An event, whose bearings and importance extended far over the island-empire of Japan, falls in this period. This is the invasion of the Mongols under Kublai-Khan. To Hôjô Tokimune belongs the credit of having defeated them and delivered the country from them (1281).

Kublai-Khan, or Kopitsuretsu, as the Japanese call him, had at the head of his Mongols overthrown the Sung dynasty in China, conquered the whole country and the neighbouring peninsula of Corea, and now cast his eyes upon Japan. His Korean envoys brought to the 91st Mikado, Go-Uda Tennô, who occupied the throne at the time (from 1257-1287), a letter, which by its insolence infuriated the court; for in it the Mongolian prince in plain words demanded submission and tribute, things to which Japan had not been accustomed. The ambassadors with their request were referred to Tokimune at Kamakura, who indignantly dismissed them, but Kublai-Khan sent fresh embassies, and caused his demand to be repeated, but with no better result. Upon this, he despatched an army from Corea in 450 junks against Tsushima and Iki, the nearest Japanese islands, and took possession of them. Then the Mongols turned to Kiushiu, where however Japanese forces had occupied the coast, and were ready to receive them, so that they withdrew again with loss (1275). Three years later a new ambassador from Kublai-Khan landed in Nagato. The Shikken had him brought before him at Kamakura and beheaded, and this was repeated once again. Soon afterwards the enemy again appeared near Tsushima in several thousand Chinese and Korean junks, landed again on Kiushiu, according to Japanese (and obviously exaggerated) accounts, with more than 100,000 men, of whom 10,000 were Coreans. This spread alarm through all Japan, especially as the first hastily collected troops were defeated. As was always done in serious crises of this kind, the Mikado betook himself to the temple of his first ancestress, the sun-goddess Amaterasu, to make his offerings and to implore her aid. Hôjô Tokimune however collected all the available troops of the country, marched to meet the foe, and defeated him in the neighbourhood of Takashima. A fearful typhoon, coming to the

assistance of the Japanese, caught and destroyed the greatest part of the enemy as they were flying in their junks (1281).

A few years after these events the Shikken died at the age of thirty. He was succeeded by his son, Sadatoki, the Prince of Sagami (1283).

The Chinese historians who make mention of this Tartar invasion, are said essentially to agree with the Japanese chroniclers. About that time Marco Polo was guest, friend and adviser of Kublai-Khan at the Chinese court, where he first received intelligence of the existence of an island kingdom to the east of China, and of the great riches which it was supposed to possess. Obviously these tidings were a great stimulus to Kublai-Khan, and we shall not be wrong in assuming that the invasion in question was partly brought about by them.

This event had no appreciable influence upon the internal affairs of Japan. In mockery of all common sense, children still continued as before to occupy the throne in Kiôto, children in Kamakura held as Shôguns their position in the government of the country, and finally members of the Hôjô family, who were likewise frequently minors, held the administration or regency in place of the Shôguns. Through all three stages in the dignities of Mikado, Shôgun and Shikken, the strictly regulated principle of heredity was maintained, according to which no Hôjô Shikken could ever become Shôgun, no Minamoto or Fujiwara could occupy the throne. As soon as the child Mikado, Shôgun, or Shikken became of age and in some degree independent, he voluntarily, or under compulsion, abdicated in favour of his nearest relatives, had his head shaved, and was received into a Buddhist monastic order, which imposed upon him no kind of renunciation, and aided him indeed in many an intrigue. Degenerate Buddhism developed its utmost power, and to it the confusion and powerlessness of the reigning houses were very welcome.

Hôjô Sadatoki, Shikken from 1284-1300, played with the Mikado and Shôguns, whose power was merely nominal, as with puppets, dismissing them and putting up others in their places at his own pleasure. Towards the year 1290 there were in Kiôto, besides Fushimi-Tennô, the reigning Mikado, no fewer than three deposed Mikados, namely, Fukakusa II., the father of Fushimi-Tennô, Kameyama, younger brother of Fukakusa, and Uda II. (Go-Uda), son of the last named, who abdicated at the age of twenty years in favour of his cousin Fushimi. There also lived in Kiôto at that time the ex-Shôgun Koreyasu, who had been sent after his father Munetaka into banishment. There governed as Shôgun in Kamakura a younger son of Go-Fukakusa, the brother of the ruling Mikado Fushimi-Tennô, called Hisa-akira. Finally the Shikken Sadatoki, in the year 1300, himself resigned in favour of his adopted son Morotoki, but

remained in fact, until his death in 1311, regent of the country. Morotoki died in the same year. There succeeded him as Shikken, Hôjô Takatoki, a child of nine years, the son of Takatoki, who, although he abdicated in the year 1326, and was succeeded by others in the title, yet in point of fact conducted the regency until the fall of the house of Hôjô. This long expected and, by many, much desired catastrophe finally arrived in the year 1333. Again it was members of the Minamoto family who overthrew the old branch of the Taira which had become too powerful, and put an end to their administration and their tyranny. What happened was this:—Takatoki, by nature weak and sickly, and having his attention otherwise taken up by many intrigues in Kamakura and Kiôto, was unable to give much attention to the administration, and left this to a paymaster called Nagasaki Takasuke, a grasping and perverse man, who was anxious to enrich himself at the expense of the country, and thus the unpopularity of the Hôjô regency rapidly increased. This particularly happened through his behaviour during a pressing rise of prices. Hitherto the Shikken had bought up the superfluity of plenteous harvests, stored it in their granaries, and then, after the failure of the crops, sold it at cheap prices, or even given it, to the people, in order to prevent famine. Now however, when in consequence of continued drought, scarcity and want had made their appearance, the paymaster vied with the bitterest usurers, and parted with rice, buckwheat, and other crops only at high prices. This and his corruptibility made him and his prop, the Hôjô, more and more hated. On the other hand, there lived in Kiôto as 96th Mikado, from 1319 to 1338, Go-Daigo Tennô (Daigo II.), who, as an exception, had only ascended the throne at the age of thirty, and despite his weakness for ostentation and women, felt bitterly the unworthy part played by the descendants of the deity that blazed in the sky, and was anxious to regain for himself and his race the old and vanished prestige. In proportion as the Hôjô, especially through the above-mentioned conduct of the paymaster, became hated, his prestige and his influence increased, particularly at the time of this scarcity. He himself, indeed, possessed very little with which he could help to alleviate the distress, but his appeal to the rich and great to co-operate in the task found acceptance, as they once more set their hopes on the Mikado-house. Various incidents which happened meanwhile, and which we here omit, including a controversy about the succession, finally led to Go-Daigo Tennô's declaring war against the Shikken. His adherents however were defeated, and the Mikado was banished by Takatoki to the island of Oki. Meanwhile, a man of great military talent and renown, named Kusunoki Masashige, came to the help of the exiled Mikado, collected an army in his province of Kawachi, with which, although it was inferior in numbers to the forces of the Hôjô, he kept the latter in check for months. This gave fresh

courage to the banished prince and his adherents. Daigo II. left Oki, collected an army in Hôki and marched with it towards Kiôto. The decisive aid however came from the north, from Kôdzuke and Musashi, and those who brought it were Nitta Yoshisada and Ashikaga Taka-uji, who now come into the foreground of history. The common ancestor of both was that Minamoto Yoshiie who distinguished himself so greatly in the second half of the eleventh century against the Emishi in Mutsu, that he still lives in Japanese history as Hachiman-Tarô. The third son of this Yoshiie had two sons, of whom the elder succeeded his father in the feudal lordship of Nitta in Kôdzuke, while the younger received through a relative the lordship of Ashikaga in Shimotsuke.

Nitta Yoshisada, a conspicuously heroic figure in Japanese history, who, like his son, fought stoutly until his death for the cause of the Mikado, had been sent as a captain in the Hôjô army against Kusunoki, but had then thrown in his lot with the latter. Upon this he had hastened to Kôdzuke in order to raise there his white banner against the Hôjô. The feudal lords of the Kuwantô, who were chiefly indebted to the Minamoto for their fiefs, gathered around him with their retainers in large numbers. Only thirteen days afterwards Yoshisada appeared with an imposing army before Kamakura, with the view of attacking it. The day before, he encamped on the flat beach near Inamura-saki, not far from Enoshimi in Sagami. Here Nitta Yoshisada, on the eve of the battle, in the presence of his troops, laid before the gods in prayer his intention of helping the Mikado to regain his old and lawful rights, and especially begged the assistance of Kômpira, the Japanese Neptune, that the waves might retire and open a passage for his army along the shore. Then he flung his sword as an offering into the waves.¹ On the next morning the waters had fallen back. The soldiers regarding it as a sign of divine favour, advanced joyfully on three sides into the battle, in which their leader exhibited marvels of bravery, and after a few hours of severe fighting took Kamakura. The great town with most of its monuments of architecture and art-treasures became a prey to the flames. Many a prominent member of the Hôjô family fell in battle after a gallant struggle; most of the others, including Takatoki, preferred the Harakiri to captivity.²

While this was happening in Kamakura, Kusunoki Masashige had taken the fortified place of Akasaka on the Nakasendô, and was marching with his army against Kiôto. From the south was advancing Akamatsu Norimura, Lord of Harima, who likewise espoused the imperial cause, towards the same goal. Kiôto was in

¹ A vignette on the Japanese paper-money represents this act.

² So it is said in the book, "*Le Japon à l'exposition universelle de 1878.*" According to other accounts Takatoki was thrown into prison, where he died of hunger.

the hands of the Hôjô. Ashikaga Takauji, as their vassal, was commanding the troops which Takatoki had despatched for the protection of the capital against the advancing foe. When he became aware of the power of the emperor's friends and the tottering fortunes of the Hôjô, he allowed Norimura to enter Kiôto, and went over to him with his army. In Kiushiu, Ôtomo, the Daimiô of Bungo, whose family by their adoption of Christianity played a prominent part in the succeeding period, had likewise successfully championed the cause of the Mikado and deposed the Hôjô governors. Go-Daigo Tennô gave to his main supporters, such as Yoshisada, Masashige, Takauji and others, the title of Shugo (high constable of a province), and made his son Moriyoshi the Sei-i-tai-Shôgun. His ways were made smooth; he was enabled to re-enter the capital of his fathers and assume the reins of government. He did so, yet only for a brief space, for civil war and misery broke out afresh over the country, and weakened authority and law, as well as all the bands of discipline and order for another 240 years, until a greater mind than that of Daigo II. finally succeeded in establishing a lasting peace.

With the fall of the Hôjô ends the age of the Puppet-Shôguns, by which is understood the period between the Shôgunate of the Minamoto and that of the Ashikaga, or from 1219-1334. It seems to us to accord better and more exactly with the facts, if we reckon this period from Yoritomo's death. The three Minamoto are followed as Shôguns or kings of Kamakura in the year 1219 by two Fujiwara, and these finally by six imperial princes, from 1251. The Fujiwara and imperial princes all, however, also took the name of Minamoto, so that formally at least the requirement was complied with, according to which the Shôgun must be a Minamoto.

FOURTH PERIOD.

THE SHÔGUNATE OF THE ASHIKAGA FROM THE FALL OF THE HÔJÔ UNTIL NOBUNAGA (1334-1573 A.D.). DISCOVERY OF JAPAN BY THE PORTUGUESE; SPREAD OF CHRISTIANITY.

BY the extermination of the Hôjô, a number of fiefs became confiscated and subject to Go-Daigo Tennô's disposal. It was an obvious idea, that he should distribute them amongst those knights who had risked everything for him, and had conducted him back to Kiôto. Instead of this he bestowed them upon unworthy parasites of the court, boon companions of his pleasures, who in part had already given offence, by their orgies, to the inhabitants of the capital, a circumstance which for that age, and in the case of a people in these things so callous and indulgent, means a great deal. This excited of course great discontent among the Samurai (the military class), and gave rise, in one of them in particular, to the

determination to make as much capital out of it as possible, and to procure for himself the office of Sei-i-tai-Shôgun. This was Ashikaga Takauji, although he had the least reason to complain, since the favour of the Mikado had rewarded him beyond his deserts, by bestowing upon him the rich provinces of Hitachi, Musashi and Shimôsa. Moriyoshi, the new Shôgun at Kamakura, speedily made himself very unpopular, by surrounding himself with unfrocked monks and adventurers of all kinds, who were able to give free course to their evil inclinations. Among these favourites was an ex-priest called Rochiu. At the head of an armed band he over-ran the Kuwantô, under the pretext of freeing it from the adherents of the Hôjô, in reality for the purposes of robbery and plunder. On his entering the territories of Takauji, the latter had him seized and crucified, a punishment which was ordinarily reserved for incendiaries. Moriyoshi was indignant at this, and as he himself had not the power to punish the independent vassal, he begged his father, the Mikado, to do it. With the Mikado however, Ashikaga Takauji had already made his peace by the mediation of a court beauty, and still remained in his former favour, perhaps too because the Tennô himself was displeased with the cruelty and the disorderly life of his son, against whom numerous complaints were made at court. At length the younger brother of Takauji, called Ashikaga Tadayoshi, rose on an empty pretext against the king of Kamakura, proclaiming a younger son of the Mikado Sei-i-tai-Shôgun (according to other accounts a surviving son of Hôjô Takatoki), collected numerous volunteers from Sagami and Musashi, which hated Moriyoshi, and marched against Kamakura. The Mikado now imposed upon Takauji the task of suppressing the insurrection. He did so, but finally united in Tôtomî with his outlawed brother Tadayoshi, marched with him against Kamakura, was here jubilantly received by the population as their deliverer from the tyranny of Moriyoshi, and then proclaimed himself Shôgun (1335), though he had still many conflicts to sustain before he was at length officially recognised as such, even by the Mikado (1338). His greatest opponent was Nitta Yoshisada, to whom the traitorous and faithless nature of his distant relative was in the highest degree repulsive. Go-Daigo Tennô, whose eyes were gradually opened, commissioned the two Nittas to chastise the usurper of Kamakura and his supporters. In Tôtômi their army came into collision with that of Ashikaga Tadayoshi. Despite some small failures they continued their march to Kamakura. Takauji here assembled all his available forces, advanced over the Hakone Pass to meet the imperial army, and totally defeated it near Takenoshita (1336). After this victory, many of the previously undecided feudal lords of the Kuwantô and other provinces, gathered under his banners. Rapidly he led them along the Tôkaidô to Kiôto. The Mikado and his adherents had again to fly, and found a refuge in Miidera, above Ôtsu, on Hiye-san. From

here he sent out fresh summonses to his vassals for support against the ungrateful rebels. Many of them obeyed. The princes of Ōshiu and the Sanindō, Kitabatake Akiye, and Nawa-Nagatoshi, and particularly Akamatsu Norimura of Harima renewed the previous alliance in support of the Mikado, and collected their comrades, who came from Kiushiu by ship. The brave and honourable old Kusunoki Masashige of Kawachi joined them, and put himself at their head. The Ashikagas had meantime driven the court from the temple-stronghold Miidera to the upper monasteries of Hiye-san, yet now they were forced even out of the Miidera by the advancing confederates. Then Masashige with the two Nittas attacked Takauji himself in Kiōto with such unexpected impetuosity, that the latter had hardly time to fly to his headquarters at Hiōgo. The Mikado was conducted back in triumph to his capital. He named Yoshisada governor of Chiugoku, Kitabatake Akiye was sent back to Ōshiu, with increased military rank, and Kikuchi Takatoshi despatched after the enemy in Settsu. He suffered however several defeats, and saw his troops deserting to the enemy. In this strait the emperor turned again to Kusunoki Masashige. Against his better military experience and judgment the latter obeyed the behest, attacked the Ashikaga on the banks of the Minato-gawa, near Hiōgo, and was totally defeated. He himself and Nawa lost their lives, while his son fled with the loyal remnant of the army to Yamato. Go-Daigo Tennō again left Kiōto with his regalia, and again sought and found refuge in Hiye-san. Takauji returned to Kiōto. He was still a rebel, whose undertakings, if they were to have any permanency, required the sanction of a Tennō. This he felt, and was adroit and shrewd enough to help himself out of the difficulty. Go-Daigo Tennō was declared to have forfeited the throne, and Prince Yutahito, a younger son of Fushimi II., and brother of the earlier anti-emperor Kiō-gon, was named Mikado. Under the name of Kōmiō-Tennō he ascended the throne, without the imperial insignia, but supported by a powerful hand. The new Mikado at Kiōto forthwith named Takauji as Sei-i-tai-Shōgun of Kamakura, his brother Tadayoshi as Vice-Shōgun, and his sons as governors of that town. The fresh proclamations which the expelled Mikado issued from his asylum, the Tendai Monastery on Hiye-san, had little effect. Only one Daimiō of importance made up his mind to espouse the lost cause, namely, Fujiwara-no-Yoritomo, lord of Kanagasaki in Echizen. To his protection Go-Daigo intrusted his two sons Tsuneyoshi and Takayoshi, but could not be induced, despite his precarious position, to follow them to Echizen. Soon afterwards Takauji made overtures of reconciliation from Kiōto. This was to be made on the basis of Go-Saga's will, *i.e.* the return to the alternation of ten years of government by the house of Go-Daigo Tennō, and its Fushimi branch respectively. Go-Daigo agreed, handed over the insignia of power, in order that Kōmiō

might be constitutionally crowned, and then received them back from Takauji according to the agreement. Instead however of allowing things to take their natural course, and living, as was expected, in retirement in the monastery near Kiôto, the news from Yamato filled afresh the breasts of Go-Daigo and his followers, including the two Nittas, with great expectations. There, as already mentioned, Kusunoki Masayuki, the son of Masashige, had rallied and reorganised the ruins of the imperial army, and thither, to Yoshino, Go-Daigo now secretly made his way from the monastery. He again issued a proclamation, in which he declared himself the only legitimate heir of the divine inheritance, and outlawed his opponents, the usurpers in Kiôto (1337). From this time for a period of fifty-six years Japan had two rival dynasties, that of Uda II. (Go-Uda-Tennô), in Yoshino, which is called also Nanchô or dynasty of the south, and is considered in Japanese history as the legitimate one, and the dynasty of the north or Hokuchô, springing from Fushimi II., in Kiôto. The intestine conflicts, which now broke out again over the country, producing the most miserable state of things which Japan has ever known, have, probably by analogy to the long English war of the succession under the two Roses, been called the War of the Chrysanthemum, because the flower of the *Chrysanthemum indicum* (Jap. Kiku) is in some measure the symbol of the sun and of the imperial authority.

Takauji, along with many bad qualities, among which his faithlessness first to the Hôjô, and then to the emperor, stands pre-eminent, possessed also many good qualities. Thus he was affable, friendly and grateful towards all those who sided with him, and amiable and placable even towards his enemies. He had the good fortune to attach a number of able men to himself and his family, principally the Hosokawa, Akamatsu, Hatakeyama, Shiba, and Uyesugi his vassals, amongst whom Hosokawa Yoriyuki, an ancestor of the later Daimiô-family of Higo, was pre-eminent. As Tai-Shôgun he had to watch over his interests in Kiôto, while his son Yoshinori resided at Kamakura with the simple title of Shôgun. Under him a Shikken (Premier) in Kiôto directed the government of the western provinces, while from Kamakura a Kuwan-rei (governor) under the Shôgun directed the affairs of the eastern provinces. Ashikaga Tadatsune was occupied in the interior of the country in conflicts with the adherents of Go-Daigo Tennô in Echigo. The latter's cause was bravely sustained here by Fujiwara-no-Yoritomo and the two Nittas, who were however finally overcome. Of Nitta Yoshisada's end, in the year 1338, history reports as follows :—

As Yoshisada, without his shield and with some fifty followers, was engaged in a reconnaissance in the neighbourhood of Fuchiu, the capital of Echizen, they were suddenly attacked in a hollow by about three thousand of the enemy. Some of those with Nitta begged him to save himself by flight. But he replied :

"I do not wish to survive my slaughtered comrades." Upon this he turned his horse against the foe and defended himself with his sword, until his horse was struck down and a fatal arrow pierced his eye. Thereupon he drew out the arrow, took his sword and struck off his own head, that the enemy might not identify him. All of his followers who still survived followed his example. When the heap of headless corpses was examined, there was found in a wallet upon one of them the autograph commission of Go-Daigo to crush the rebels, and Nitta was thus recognised. The body was buried near Fuchiu, but the head was sent to Kiôto, and there publicly exposed upon a pillory. Nitta Yoshisada was only thirty-eight years old when he died. His chivalrous feelings, his great heroism, and the unchangeable fidelity with which he was devoted to his lord, have secured him, by the side of Yoshitsune, Kusunoki Masashige, and various other heroes of mediæval Japan, a foremost place in the memory of posterity.

In Mutsu and Dewa the adherents of the imperial cause had greater forces at their disposal. Led by the young Takaiye, the son of Kitabatake Akiye, they even achieved some brilliant victories before the gates of Kamakura. Inexperience, youthful impetuosity, and the wish to meet as soon as possible with the younger Kusunoki in Yoshino, led away Takaiye to undertake a march against Kiôto, in which he lost the battle and his life at the age of twenty-one.

Of the further events of this period, only the most important can be mentioned here.

Go-Daigo Tennô died in Yoshino, and left the disputed inheritance to a son, Norinaga, twelve years old, who as 97th Mikado, under the posthumous title of Go-Murakami-Tennô, resided in Yoshino for thirty-four years (from 1339-1374), a comparatively long period. The official "*Histoire du Japon*," which appeared on the occasion of the last Paris Exhibition, can find little that is noteworthy to report of him. In a short time the leading heroes of the imperial side were all dead, and the prestige of the southern dynasty had disappeared with them. On the other side, Kômiô-Tennô abdicated in 1349 in favour of his nephew Shukô-Tennô, who was however deposed after three years. He was followed from 1352-1371 by Go-Kôgon-Tennô. Soon afterwards Ashikaga-Takauji died at the age of fifty-three. He was succeeded by his son, Yoshinori (1359-1367), who thereupon resigned in favour of his grandson Yoshimitsu. The latter reigned as Tai-Shôgun, from 1367-1393, when he likewise resigned at the age of thirty-seven. His death took place in 1409. This is the great Ashikaga, who had been warmly recommended by his grandfather to Hosokawa Yoriyuki. The latter most carefully directed the education of the young prince, and not only gave him an abundant stock of knowledge, but early accustomed him to the exercise of all the knightly qualities of that age. This Kuwanrei Hosokawa was a

light of his time, in respect both of knowledge and character, a man with a strict sense of justice, and with the necessary energy to attack evil doers.

About the year 1392, when the prospects of the southern dynasty looked particularly bad, the Shôgun Ashikaga Yoshimitsu proposed to Go-Kameyama-Tennô (successor of Go-Murakami-Tennô) that there should be peace, and upon the same terms on which it had before been concluded between his grandfather Takauji, and Go-Daigo, and had so soon been broken again by the latter. Kameyama agreed, came to Kiôto with the imperial insignia, handed them over to his previous opponent Go-Komatsu-Tennô, so that the *sokuji* (public coronation) of the latter might, though late, be performed, and then retired. Japanese annals accordingly date the regnal years of Komatsu II. only from the act of coronation, and do not take into account his earlier reign of ten years. According to them he was 99th Mikado, from 1392-1412.

For a brief period the country now enjoyed the rest of which it was so sorely in need; for in consequence of continual civil wars the constitutional powers had become completely disorganized, especially in the parts of the country at a distance from the chief towns. The peasant was impoverished, his spirit broken, his hope of better things completely gone. So he dreamed away his miserable existence and left the fields untilled. Bands of robbers followed the armies through the interior of the country, and increased the terror and the feeling of lawlessness and insecurity. The coast population, especially that of the island of Kiushiu, had given itself up in a great measure to piracy. Even on the coasts of Corea and China these enterprising Japanese pirates made their appearance. The terror which they spread everywhere was so great, that like the fear of ghosts it was propagated from generation to generation, and even to-day mothers, on parts of the Chinese coast, threaten their children, when they will not go to sleep, with the Japanese corsairs.¹

In Kiushiu the influential Kikuji family had, with several others, given essential support to this system of buccaneering, and had derived great profit from it. One of its members, called Take-masa, held a great court and lived in princely magnificence. He repeatedly received and dismissed with rich presents and ample promises, embassies sent to Japan by the courts of China and Corea in order to make representations and complaints of this piracy, without these complaints ever reaching their goal or making their

¹ A very interesting confirmation of this is afforded by K. Himly in his article "Ueber zwei chinesische Kartenwerke" in the "Zeitschrift der Gesellschaft für Erdkunde," Berlin, 1879, p. 181, etc. "Along the coast, from the mouth of the Yang-tsze-kiang, to Kwang-tung we are struck (in one of these maps) by the five times repeated name Hai-Woe (Sea-Japanese), which refers to the incursions of the Japanese which took place in the time of Ming. Even now, the children in Che-kiang are admonished to sleep by the fearful words: 'Wo-jên-lai (in the dialect of the district Wo-ning-lâ), the Japanese are coming.'"

way to the government in Yoshino or Kiôto. A new Korean embassy finally effected its object. Yoshiimitsu, the Shôgun listened to their energetic complaints, and as this happened at the time when the two dynasties were reconciled, he could give them some redress, and amongst other things restore to their country several hundred Koreans, whom the pirates had carried off to Kiushiu. China did not omit to return him thanks for this service. These events happened in the early years of the Ming. After this dynasty had shaken off the Tartar domination and had restored order in the interior of China, it cast its eyes to the coasts and endeavoured here likewise to restore the long lost security. In this, through the friendliness and co-operation of Japan, they were successful. From this there grew up a mutual friendly intercourse between the two countries, which is however variously interpreted. China was at that time in the eyes of the educated Japanese the model country, and the highest statesmanship consisted in copying it. Amicable relations with it were accordingly regarded as a great benefit for Japan. It appears however that the Shôgun Ashikaga Yoshiimitsu went too far in his efforts to bring about these relations, and reduced Japan to a sort of dependence upon China. About the year 1400, as appears from Chinese and Japanese annals, he took from the Chinese Emperor Sing-Sung-Hoang-ti the title of Jipên-wang (Nippon-ô), king of Japan, and pledged himself to the payment of a yearly tribute of 1000 ounces of gold. The Japanese, whose patriotism is reluctant to admit this, explain it by saying that this sum was not so much a tribute, as rather a compensation for the injuries which Japanese pirates had inflicted upon the Chinese coasts.

In Kiôto Yoshiimitsu exhibited great splendour. The temple of Kinkakuji and Ginkakuji (monastery of the golden kiosque) near the town, which on account of its gardens is considered one of the great lions of the southern capital, owes its fame to him.

Soon after the death of Yoshiimitsu, fresh disagreements of all kinds arose, not only with regard to the succession to the imperial throne and the Shôgunate, but also among the great vassals of the country, in consequence of which the land was devastated for another hundred years. Many vassals had become too powerful, and troubled themselves little as to emperor and kingdom, or only did so when their own interests were at stake. Their feuds with each other were endless. Thus, for instance, the powerful houses of Takeda of Kôshiu and Uyesugi of Echizen waged war against each other for many years. This was a yearly recurring summer entertainment for Takeda Shingen, in which everything was done in true knightly fashion and in regular form. Most of the important Daimiôs (great landowners) of the later time, of the Shimadzu, Hosokawa, Ôtomo, Môri, Tokugawa, Hôjô (of Odawara), Takeda, Maëda, Satake, Ota, etc., laid the foundation of their power in this period, or extended and confirmed it. Their vassals,

the Kerai or Samurai class, were still conscious only of their relations to their immediate lords, whom they blindly followed, whether this meant to draw the sword for or against the Mikado.¹

How great was the material ruin of the country, and how low the prestige of the Mikado, in the last half of this period, is shown also by the fact that when, in 1500, Go-Tsuchimikado, the 102nd Mikado, died in Kiôto, his corpse had to be kept for forty days at the gates of the palace, because the necessary means were wanting to defray the costs of the prescribed funeral ceremony. M. v. Brandt,² who mentions this interesting fact, very properly points out that this happened at the time when Columbus was still endeavouring to find the western route to Zipangu and Cathai and their treasures, so much vaunted by Marco Polo.

To the horrors of the never ending civil wars were added, in the first half of the sixteenth century, frequent violent earthquakes, drought and failure of crops, famine and devastating diseases, which increased the misery and wretchedness under which the mass of the population were groaning without prospect of salvation. Even the consolation of religion was wanting, for the Buddhist priests had long been strangers to the lofty duty of imparting it, which Siddhârtha had once destined for them. In their efforts after power and influence they took an active part in all the controversies and intrigues of the time, and were not behind the rich in luxuriousness and dissoluteness of life. Their monasteries were fortresses, in which only the great political gamblers, and not the oppressed people, found comfort and help. Trade and industry, except such as served for the equipment of the warrior, were quite neglected; the ruin became ever deeper and more universal. Many a town, many a happy home, became a prey to the flames; and those who had dwelt in them, vagrants on the earth. The land grew waste, for those who might have cultivated it were frightened away, or were drafted into military service.

"About the year 1545," relates Dickson, "Kiôto was so reduced, that no one could live in it, and any one who ventured to remain amidst the ruins, ran the risk either of being burnt or murdered, or at least of dying by starvation. The Kuge (the court nobility) had left the town and sought shelter and protection with Buke (feudal lords) in the provinces."

This is, briefly sketched, the picture of Japan about the middle of the sixteenth century, during the last decade of the Shôgunate of the Ashikaga. It was a period of the greatest political confusion, and of the most lawless and miserable state of things, that the history

¹ The analogy with mediæval times in Germany is everywhere obvious, and might be shown to exist also in religious matters.

² M. von Brandt: "The Discovery of Japan and the Introduction of Christianity." *Mittheilungen der deutschen Ost-Asiatisch. Gesellschaft*, etc., Heft 5, p. 28, etc.

of the country can show. Suddenly, there fell into the midst of this darkness and this terrible condition of affairs, from the distant West, a ray of light, at which many thousands were soon to warm themselves and lift up their heads again,—the light of the Gospel. It was “the arms and the renowned heroes who forced their way from the western shores of Portugal through as yet unnavigated seas to beyond Taprobana,”¹ that paved the way for it.

Fernão Mendez Pinto, a Portuguese adventurer, who had navigated all the seas discovered by his countrymen, and travelled through the countries they had conquered, was the pioneer, who first made his way to the Japanese Islands and brought to Europe the earliest details concerning them, which the Bard at Macao (Camoêns) made use of, when in his *Lusiads* he says (X. 131), “Yet overlook not the islands in the sea, with which Nature would adorn herself yet more. The half-concealed island which corresponds yonder to China, from which it was discovered, is Japan, that produces such fine silver and is now enlightened by the Divine law.”

The discovery of Japan by Mendez Pinto took place in the year 1542, at the time when Martin Alfonso de Sosa was Captain-General of Portuguese India, and when this, through the discoveries and conquests on the east coast of Asia, had reached its greatest extension. With Alfonso de Sosa, went to Goa one of Loyola's most zealous disciples, Francis Xavier, who was afterwards designated the Apostle of Japan.

Mendez Pinto has himself related for us the circumstances under which he reached Japan. The history of his experiences in Chinese waters is so complicated, and what he reported of the newly-discovered country and people sounded so strange, that the truthfulness of his narrative was long doubted, and his name Mendez was treated as synonymous with Mendaz, liar.²

Special circumstances had led Mendez Pinto, Diego Zaimoto and a third Portuguese called Christobal Baralho, to go on board the junk of a Chinese pirate, in order to return from Cochín China to China. In a fight with another pirate this junk became separated from its companions, and was then prevented by a storm from making the Loo-choo Islands, as the master of the ship had intended. After a tedious wandering of twenty-three days on the open sea they observed a strange island, to which they steered. It was

¹ Taprobane of Ptolemy, the island of Ceylon.

² The printed account, which he had written for the instruction of his heirs, first appeared at Lisbon in 1614, and therefore long after his death, under the title “Peregrinação de Fernão Mendez Pinto, em que da conto de muytas et muyto estranhas cousas, que vio et curio no regno da China, no da Tartaria, no da Sornau, que vulgarmente se chama Siaô, no da Calaminham, no de Pegu, no de Martavaô e em outros muitos regnos e senhorias das partes Orientaes, de que nestas nossos do occidente ha muyto pouca ou nenhua noticia.” Lisboa, 1614. Fol. This narrative, however, found so much acceptance, that a whole series of fresh editions was called for down to the present century. It was frequently treated as a Portuguese Robinson Crusoe romance.

Tanegashima (Tanixumah in Pinto) to the south of Kiushiu, and Kura was the place where they landed. They found a friendly reception, but were directed to go with their boat to the post-town of Akaoki (Miaygimah in Pinto). Soon after their arriva', the governor with his retinue came on board, and interrogated them minutely. An old woman of the Loo-choo Islands (Liu kiu, or Riu-kiu), who understood the speech of the Chinese captain, acted as interpreter. The history of the Portuguese, and what they related of their distant home, interested the natives exceedingly; while their weapons and beards made no slight sensation. Hereupon the governor invited them all to visit him the next day, that they might continue their narrative, for this interested him much more than the wares which Necoda (so Pinto names his captain) had brought with him. After he had taken his departure, a boat came and brought them, from him, all kinds of refreshments, including grapes, melons and pears. On the next day they repaired to the Nantaquin (the governor) and met with the most cordial reception. The Necoda was asked to exhibit his wares to the collected native merchants in a separate building, and soon sold them at a great profit. The Portuguese, however, who obviously were regarded by the general sense as belonging to a higher social class, had a house of their own assigned to them, close to the governor's, and were at liberty to amuse themselves with hunting and otherwise.

The credibility of this account is further increased by the additional remarks on the beauty of the temples and the friendly affability of their priests, the bonzes. Pinto expressly points out that friendliness is a very pleasant trait of the Japanese character.

The greatest sensation was caused by Zaimoto, a good shot, with his match-lock. When he had brought down his first brace of ducks with it, the spectators, who had no idea of the construction and effect of firearms, hastened to the governor Tokitaka, and told him of the great marvel. He had the arquebus shown to him, and was so enchanted with it that he adopted Zaimoto as his own son, and heaped honours upon him, in which his comrades also shared. Zaimoto made the Nantaquin a present of the flint-lock and taught the Japanese how to make gunpowder. Pinto praises the great dexterity of the people, who soon succeeded in making and employing an equally good weapon. "When we left the island after about six months," he says, "they had already over 600 guns, and later, when the Viceroy Alphonso de Noronha, in 1556, sent me to Japan, all the towns of the kingdom were abundantly provided with these arms." Pinto also points out that the Japanese took great pleasure in the manufacture of weapons, and therein surpassed all the neighbouring people.

The news of the arrival of Pinto and his comrades at Tanegashima had gradually made its way to Funai, to Ôtomo (Pinto writes Orgemdo), the prince of Bungo and Hakata. He had heard much about the strangers and their wonderful weapons,

and also that they carried swords like the Samurai, thought much of honour, and were not traders. This led the old and gouty gentleman to despatch an envoy to the Nantaquin of Tanegashima, his son-in-law, with a long letter, begging him to send one of the strangers to him. The governor communicated his father-in-law's wish, and observed that he should not like to part with Zaimoto. He chose Pinto, as being of a cheerful disposition, and more likely to entertain his father-in-law. After calling at several places on the coast, they finally reached Funai, in the year 1543, which from that time became the chief goal of the Portuguese immigration, which soon followed.¹

Pinto was received in a most friendly way, and caused the greatest sensation, particularly with his arquebus. Yet he very nearly lost his life, through the circumstance that the prince, who was seventeen years of age, was once playing with the arquebus in Pinto's dwelling, without his knowledge, and burst a barrel, wounding himself seriously on his forehead and his hand; but the prince explained in time to the angry courtiers who came hurrying to the spot, that Pinto was innocent in the matter. Happily also he succeeded in curing the wound. He was richly rewarded, and was at length enabled to sail back, in a ship belonging to the prince, to his comrades at Tanegashima, and soon after to embark with them and the Chinese corsair for China. Here they landed at Liampo (Ningpo?).

The reports concerning the Japanese people, their wealth and the great profit, which the pirate had made upon his wares, attracted many to follow his example. With the utmost despatch other Portuguese residing in Ningpo, as well as Chinese, equipped nine junks; and even Pinto was induced to put his money into this speculation, and to take a share in freighting one of these junks. The little commercial flotilla was overtaken by a storm near the sandbanks of Gotom (Gotô) and all the ships but two destroyed. Pinto was upon one of these two vessels. Then came another tempest, which destroyed even these two vessels and most of their passengers, so that only twenty-four men—including Pinto—and a few women escaped with their lives to Great-Lekio (Great Liu-kiu).² Their reception here was at first by no means friendly; indeed, for a time it appeared as though the unfortunates had only been saved from the power of Neptune to fall a sacrifice to the sword. At last, however, they found sympathisers even here, were entertained, and with numerous presents were sent back on a Chinese junk to Ningpo.

¹ According to Japanese accounts, only two Nan-ban (southern barbarians, Portuguese) came to Tanegashima, who were called Miura Suiska and Krista Moto, and perhaps answer to Zaimoto and Boralho. The celebrated painter, Hokusai, represents them in his *Mangwa* (Sketch-book) with fur caps upon their heads and arquebuses (long match-locks) in their hands.

² Probably Ôshima is meant. Pinto calls its chief town Pungor, and mentions that it lies in lat. 29°.

The Portuguese settlers on the coast of China, however, did not allow themselves to be deterred by the unlucky issue of this first commercial undertaking. Renewed experiments, undertaken from Ningpo and Macao, were speedily followed by better results. The feudal lords in the south of Japan favoured this new commerce, which brought them money and better weapons, and thus lent them essential aid in their feuds.

In that age, also, the trader was soon followed by the missionary. They were not always peace-bringers. Only too often trade and piracy, sword and cross, were in intimate alliance, and worked for each other to the prejudice of Christianity. The spirit of the age had also seized upon many of the preachers of the gospel, so that their life very frequently did not correspond with the exalted doctrines which they sought to propagate among the heathen. Interference in worldly affairs, efforts after wealth and power, are the things with which the Church was justly reproached. Francis Xavier, the Apostle of Japan, was not of this stamp; a true servant of religion, he strove not after empty fame, nor after gold (Camoëns, X. 150). He offered a rare example of humility and purity of life, in harmony with the enthusiasm and fidelity to conviction, with which he preached the word of God among the Japanese. This he first did in 1549 at Kagoshima, the capital of Satsuma. Thither Xavier had made his way on a Chinese junk from Malacca, accompanied by two other Jesuits, Balthasar de Torres and Juan Fernandez, and by one Japanese, and had met with a friendly reception from the house of Shimadzu, the Daimiô family, and the population. As interpreter he employed his Japanese companion, Anjiro, a young Samurai, who in consequence of a murder had fled in the pirate ship to Tanegashima and had then travelled with Pinto and his companions to Macao. Afterwards he went to Goa, learnt Portuguese, became a Christian and was baptized by the name of Paul, and was doubtless a main cause of Xavier's resolutions.

The Japanese made the most favourable impression upon Xavier. In his *Epistolæ Japonicæ*, he congratulates himself that here he finds no insolent Mohammedans, nor filthy Jews. No infidel nation has pleased him so much as this, which behaves so civilly and amiably, and is so free from treachery and malice. In another place he again gives utterance to these impressions, saying, "I cannot cease from praising these Japanese. I am really charmed by them."

The hopes which were excited in Xavier by these first impressions were not however destined to be realized. The Daimiô was displeased that the Portuguese merchants had brought arms and the advantages of commerce to his opponent, Otomo of Bungo, and not to him. To this was added the influence of the priests, who warned him against favouring the new doctrines, and thus Xavier was soon obliged to leave Kagoshima again with his companions. They betook themselves to Hirado, then to Nagato

and Bungo, and were everywhere most favourably received. Here also they soon succeeded in establishing some Christian congregations.

From Yamaguchi in Nagato, Xavier set out in 1550 to travel on foot to Kiôto (Miyako). The country was full of war, and armed bands made the roads unsafe. In the capital the saintly pilgrim found, instead of the splendour described by Marco Polo, ruins, confusion and wretchedness. He wished to speak to the Kubosama (Shôgun) and the Dairi (Mikado), but could not attain his object. His poor clothing and modest demeanour rendered him contemptible. He consoled himself on hearing that neither Mikado nor Shôgun had much influence in the country. In the streets, where he then proceeded to preach, no one listened to him, because the sounds of war and anxiety disquieted the inhabitants. Thus then, after a stay of fourteen days, he turned his back upon the city, in order to return to Funai in Bungo. Here he remained for some months longer, had numerous controversies with the bonzes, against whom the Daimiô gave him his protection, and then embarked on the vessel of Duarte da Gama for Macao (1551). He died shortly afterwards on the island of Sanshan on the Canton river, on the 2nd of December, 1551. The seed which he had carried to Japan, and which other missionaries after him continued to plant and water, soon bore its fruits. Special circumstances furthered the mission-work, so that after only twenty years the number of Christians in Japan was reckoned at upwards of 30,000. Further details as to the development of Christianity, its opponents, and final extermination, will be given in connection with the later political events in the next two chapters.

FIFTH PERIOD.

FROM NOBUNAGA UNTIL IYEFYASU; OR AGE OF THE USURPERS
(1573-1603 A.D.), NOBUNAGA, HIDEYOSHI, EXPEDITION TO
COREA, BATTLE OF SEKIGAHARA.

THE second half of the sixteenth century is the most interesting and important epoch in the history of the Japanese Middle Ages, which terminate with it. It is the age of the propagation of Christianity and of its first bloody persecutions, the age of the greatest external development of the power of the country and of its most pregnant internal changes. At the head of the important events which we have to consider in this period, stand three famous names, those of the most powerful and most important men to whom Japan has given birth,—Nobunaga, Hideyoshi and Iyefyasu, though the main history of the last-named falls in the beginning of the seventeenth century.

We have seen that under the dynasty of the Ashikaga, Japan

never attained internal peace; that it was devastated by endless civil wars; that life and property were at the mercy of the great, while oppression, poverty and misery were the lot of citizen and peasant; that the Mikados and Shôguns had as a rule little prestige and influence, and the laws no defenders; and that this state of confusion and wretchedness, especially about the middle of the sixteenth century, baffled all description. Then there suddenly appeared a man who sought, not without success, to tear up with iron hand the political and social fabric and to restore discipline and order. This man was Ota Nobunaga.

The Ota family was of Taira descent, and was founded by Ota Chikazane, a great-grandson of Taira Kiyomori. His father, Sukemori, had been put to death by the Minamoto. His mother had then fled with him to the village of Tsuda in Ômi, and had there married the Nanushi (headman of the place). Now it happened one day that a Shintô-priest of the village of Ota, not far from Fukui in Echizen, had stayed with the Nanushi in Tsuda, on his way to Kiôto, and had begged him to give him one of his sons, that he might adopt him and make him his successor in office. Kiyomori's great-grandson was handed over to him and henceforth received the name Ota Chikazane, became a Shintô-priest, married and left behind him descendants who in part returned again to the warlike habits of their forefathers. Two of them won great fame by their bravery, Ota Nobunaga and Shibata Katsuiye. To the inheritance which Ota Nobunaga received in Owari in 1542, the fortune of war soon enabled him to add Suruga, Mino, Ômi, Mikawa, Ise and Echizen, so that he became the most powerful feudal lord of the country. He was not indeed scrupulous in his choice of means, and did not shrink from slaying his own younger brother in 1557, and his father-in-law, the lord of Mino, in Gifu, in 1562, and seizing their possessions for himself, when they put themselves in opposition to his efforts after power and influence. After taking possession of Gifu, he removed his residence from Nagoya thither. The renown of his great bravery and his unwonted good fortune in war reached the court and led the Mikado Oki-machi to invite him to undertake the pacification of the country. Simultaneously Ashikaga Yoshiaki appealed to him with the request that he would secure the Shôgunate for him. He endeavoured to comply with both requirements, marched with Yoshiaki at the head of a powerful army into Kiôto, compelled the then Shôgun Hisahide and his followers to take flight, and secured the succession for Yoshiaki (1568). As the latter, however, was not content with the modest rôle which his patron allotted him, he set on foot a conspiracy against Nobunaga, with the result that Nobunaga deposed him in 1573. Thus ended the Shôgunate of the Ashikaga. The dignity of a Sei-i-tai-Shôgun remained vacant until the year 1603, when Tokugawa Iyeyasu was invested with it for himself and his descendants.

Nobunaga's entry and stay in Kiôto proved highly beneficial to the city and the country. Security, quietness and order returned, and the citizens could once more pursue their peaceful occupations. The imperial palace was restored, and for Nobunaga himself a great castle with fortifications was constructed on the west side of the town. This was Nijô, which later belonged to the Tokugawa, and now serves as the government building for the Fu of Kiôto. Nobunaga further concerned himself with the improvement and security of the country-roads, and in this way rendered very great service to the country, which the Mikado recognised by naming him Naidaijin and afterwards Udaïjin.

Nobunaga strove to govern the country in the name of the Mikado. Two powerful foes to the realization of this aim still stood in the way to hinder him; the Buddhist priesthood, and the unbroken power of the great, and in fact, independent feudal lords in the more distant parts of the country. They continued to carry on their bloody feuds, without troubling themselves with what went on in Kiôto. The object of each of them was if possible to crush his neighbour and opponent, in order to increase his own dominion by that of his neighbour. Thus in Kiushiu the house of Ôtomo of Bungo, and that of Shimadzu of Satsuma, were opposed to each other. The former was also at enmity with Môri, the powerful prince of Yamaguchi, in Suwô, who besides this province had reduced nine others under his sway. In the Kuwantô, Takeda of Kai was defending himself against Hôjô of Odawara, with whom Nobunaga and Iyeyasu made common cause. In this desperate conflict the last Takeda finally put an end to his own life, upon Tem-moku-San, when his army was annihilated and his province lost, and in many other districts the struggle for dominion and possession was still going on.

Five celebrated commanders sided with Nobunaga; Hideyoshi, Goroza, Shibata, Ikeda, and Iyeyasu, of whom especially the first and last-named attained under his leadership to continually increasing influence and fame. With them he would probably have finally ended by crushing his most powerful opponents in arms and by reducing the country to peace. The power and influence of the degenerate Buddhist priesthood appeared to him to be a great obstacle to the attainment of this aim. He determined to crush them, and chose two ways of carrying out his resolution. In the first place he favoured the new doctrine of Christianity, which was everywhere striking root, by bestowing upon its preachers land for the building of churches, and by protecting them against the hostility of the bonzes. Next he took up the sword in order to break down the fortresses into which many Buddhist monasteries had been transformed. Thus it came about that Nobunaga was regarded by the Buddhists as a demon and persecutor, who was bent upon exterminating their religion, while the Jesuits and historians of the Church in Japan praise him as a friend and patron of their cause.

Among the Buddhist monasteries, two in particular had excited Nobunaga's ire, through their great wealth and influence as well as through the shelter and support they had always afforded, as fortresses, to his opponents, namely that of the Tendai sect on Hiye-san on Lake Biwa, and Hon-gwan-ji, the powerful monastery of the Shin or Ikkô sect in Ôsaka, afterwards the castle of this town.

It was at Seta, on the Nakasendô, at the outfall of Lake Biwa, in sight of Hiye-san and its monasteries, that Nobunaga, in 1571, bade his generals destroy these homes of the monks with fire and sword. In vain were all appeals to their antiquity and lofty fame, and all entreaties that he would revoke his order. Nobunaga's answer was: "These bonzes never obeyed my commands, but always supported the worthless and so resist the imperial army. If I do not destroy them this evil will always continue. Moreover, I have heard that these priests transgress their own rules. They eat fish and stinking vegetables,¹ keep concubines, and roll up the sacred writings instead of reading them and praying. How can they be workers against evil² and guardians of justice?" On the following day his order was carried out and nothing was spared, but everything that escaped the fire perished by the sword.

At Adzuchi-yama, on Lake Biwa, Nobunaga had built himself a magnificent castle, and not far from it had also assigned to the Jesuits a site for a settlement. Two powerful Buddhist sects, the Nichiren and the Jôdo, held here, in 1579, a theological discussion before Nobunaga, upon which a book is still extant, the Adzuchi-Ron (Theological Controversy of Adzuchi). Upon this occasion, a branch of the Jôdo developed ideas so dangerous to the State, in the eyes of Nobunaga, that he suppressed it.

At length, in 1580, Nobunaga took serious steps also against Hon-gwan-ji, in Ôsaka. For twelve years the bonzes of the fortified monastery had been his declared enemies. The siege caused great losses upon both sides. Finally the Mikado intervened and obtained for the inhabitants, amongst whom were a great number of refugees, leave to depart upon capitulation.

Two years later, while Nobunaga was still at the height of his physical energies, of his power and his prestige, a violent death overtook him in Kiôto. A short time before, he had built a splendid temple at Akuchi, had set up idols of all the gods of the country, and in the midst of them a statue of himself, under a title meaning "exalted ruler," and had had reverence done to it. His eldest son was the first to bow down before it, and then his vassals and the people had followed the example.

It happened that in Chiugoku, his favourite and most trusty

¹ The five species of the genus *Allium*, forbidden to the Buddhist priesthood are, porret, shallots, chives, garlic and onions.

² See page 223.

general, Hideyoshi, was fighting for him against the still very powerful Môri, and had rallied to his standard all available forces. The last of these, which were in Kiôto, were to be conducted to him by Akechi Mitsuhide, a proud and brave general; who, however, considered this a favourable opportunity of avenging an insult formerly offered him by his master, and of raising himself to the height of power. He left Kiôto with his troops; but instead of pursuing the prescribed route, he took his captains aside, represented to them how Nobunaga had mocked at the gods and put the priests to death, promised them wealth and high dignities, and thus won them to his traitorous plans. Then he turned back with his followers, suddenly reappeared in Kiôto, and surrounded Honnôji, the temple in which Nobunaga was living. As the latter opened the window to observe the cause of the disturbance which made itself heard, he at once perceived his position, for a shower of arrows followed, one of which wounded him in the shoulder. There was no hope of escape. So he set fire to his habitation, and was consumed with it, in the 39th year of his age, A.D. 1582.

In the "History of the Church," Nobunaga is portrayed as a prince of tall, yet slender figure, with heart and spirit which compensated for all his defects, and an unbounded ambition. He was further, in the opinion of the Jesuit fathers, brave, magnanimous and bold, and not without many excellent virtues, a lover of justice and an enemy of treason. With a quick and penetrating understanding, he seemed to be, as it were, created for his position. Distinguished by his military training and capacity, he was reckoned the bravest and best of commanders, who never needed the counsel of others when it was necessary to besiege or fortify a town, to mark out an encampment or anything of the kind. He always sought to penetrate the thoughts of others and to conceal his own. He laughed at superstition, and regarded the bonzes as impostors, who abused the credulity of the people and thus sought to cover their own excesses. Opposed to this judgment is that of Kaempfer, who about a hundred years later, under the influence of his Japanese surroundings, called Nobunaga a tyrant.

If we now once more sum up the main points in what has here been said of Nobunaga, we may put it thus:

In the period from 1542 to 1582, in the midst of internal disturbances, Nobunaga comes to the front as a champion for the rights of the Mikado, and puts an end to the Shôgunate of the Ashikaga,—as a foe of the Buddhist monasticism, whose power he crushes,—as a protector, though not as a friend of Christianity, to whose spirit he remains a stranger. The praise which the Jesuit father, Crasset, pours upon him in his "*L'histoire de l'Eglise du Japon*," does not accord with the above-quoted expression of Kaempfer, nor with many other facts from the history of his life. Ota Nobunaga was a Taira, yet this family descent had nothing to do with his elevation to power, which was exclusively the result of a conspicuous military

capacity and of an unbounded ambition. But despite these qualities, he did not succeed in restoring to the country the quiet so much needed and so earnestly desired. The man whose ambition and mistrust did not spare the lives of his nearest relatives, who claimed for himself the right of apotheosis, which belonged only to the Mikado and then applied only to the dead, setting up his statue among the images of the gods and causing adoration to be paid to it, with all his other exalted endowments knew nothing of and was no friend to Christianity. It was only from hatred of the Buddhist priests, and in order to have a safe and cheap ally in the struggle with them, that he favoured the propagation of the new doctrine.

Christianity had in a few decades, under the protection of Nobunaga, made astonishing progress. About the year 1581 the Jesuits reckoned nearly 150,000 adherents in all classes of society, and over 200 churches. The Daimiôs (the Jesuits call them kings) of Bungo, Ômura, Arima in Kiushiu, as well as of Amakusa, Hirado and the Gotô Islands, had embraced the new doctrine, and favoured its propagation in every way. In Shikoku, the Daimiô of Tosa in 1576 embraced Christianity, in spite of great hostility in his family and among the leading men of his country. In the main island even there were several Christian princes.

Many favourable circumstances co-operated to assure to the missionary work of Loyola's friends among the Japanese a success which may be compared with the rapidity of the spread of Christianity by the first apostles. The foundation of the Jesuit order coincided exactly with the epoch of the discovery of Japan by Mendez Pinto. Many of its emissaries brought with them almost all the requirements which assure the success of a reformer. Hand in hand with a holy earnestness went their morally blameless life, their cheerfulness in enduring exertions and privations of all kinds, nay even death itself, for Christ's sake, their condescension and benevolence to the poor, while the bonzes in their moral corruption and degeneracy had no heart or ear for the misery of the common people. And this misery was at that very time, as we have seen, particularly great. If Christianity could not provide deliverance from it in this life, at least it held out to the patient sufferer the prospect of paradise after death, and infused into him gladness and a new self-consciousness.

Together with Xavier in 1549, Torrez and Fernandez had also come to Japan. The latter in that very year communicated to Xavier his intention of going to China. He had ascertained in Kagoshima that the Japanese in all points looked upon the Chinese as their instructors, and imitated them, and had received even their religion from them. He wished, therefore, to preach Christianity to the conservative neighbours of the Japanese, in order by that means to procure it easier admission also into Japan. Father Balthasar de Torrez remained on the contrary in the empire of Nippon, where he devoted himself to his successful mission-work

for twenty-one years, until his death in Xequi (Island of Koshiki) in 1570. It is recorded of him that he led a genuine vegetarian life, never partook of animal food or spirituous liquors, and almost always went barefoot.

A further ground for the rapid propagation of Christianity lay in the relationship of the Catholic rites and ceremonial to the Buddhist; for we find in Buddhism, though it may be with a different meaning, nearly everything that is characteristic of the Catholic cultus: the adoration of images, incense and the mass, parti-coloured vestments and rosaries, the veneration of relics, monasteries and convents, celibacy, priestly hierarchy, pompous processions, pilgrimages and much besides. Accordingly the new convert could make use of his old rosary, his bells and lights, his incense and the other external accessories of his former faith, to join in the new worship; as previously he had been wont to bend the knee before Buddhist idols in temples and along the roads, he now did the same, at the instruction of the new teachers, before images of Christ, of Mary and of the saints.

According to the testimony of the Dutch, which it is true does not always appear impartial, the Jesuits sometimes exhibited in the churches dramatic representations of Scripture narratives, a proceeding which found great approval, and might recall the pantomimes before the Shintô-temples on festal days. "By these unwonted ecclesiastical pageants, the Japanese were excessively delighted, especially in the kingdom of Amanguzium, *i.e.* Yamaguchi" (*Denkwürdige Gesandtschaften*, etc., p. 211, Amsterdam, 1669).

The chief motives for the friendly reception of strangers must, after allowing for the natural amiability and curiosity of the Japanese, be sought in the material interests of the princes, which were thus essentially promoted. The Portuguese brought richly-laden ships from Goa, Malacca, the Philippines and Macao, to Japan. The princes of Bungo, Ômura, Arima, Kagoshima, Yamaguchi, Hirado and Gotô afforded them good ports of disembarkation. Each prince was anxious to profit by this commerce. He who had the Jesuits as his friends could turn the prows of the Portuguese wherever he would, because the navigators were entirely guided by their wishes and directions. For a long period fire-arms were the merchandise most sought after. These, Christianity and the Portuguese (*Namban*), formed the new phenomena which had been simultaneously introduced, and which were accordingly always associated with each other, so that frequently the fear of one instilled fear also of the others.

Father Alex. Valignan, the Superior, a person whom Nobunaga was always glad to see, divided Japan into three districts; the main island (*Hondo*), *Kiushiu*, which the fathers called *Ximo*, and *Shikoku*. In *Hondo* the Jesuits had three settlements, namely, in the capital *Meako* (*Miako*), at *Anzuquiyama*, (*i.e.* *Adzuchi-yama* in

Ômi), and Takaçuqui (*i.e.* Takatsuki in Settsu). In Miyako were nearly 20,000 Christians; there dwelt there two *patres* and two *fratres*. They had a church¹ in which they preached and performed mass daily. At Adzuchiyama on Lake Biwa, "the Paradise of Nobunaga," as the natives called it, four fathers had likewise settled, with the support of their powerful patron, and there they had a church and a splendid house, and taught every day. Their third settlement, at Takatsuki, sheltered two Jesuit fathers. Takayama (called Justo Ukondono by the Jesuits), the Christian governor of this strong town, built them a house and church. Several surrounding towns also had Christian temples. Moreover a church was built at Sakai on the shore of the Inland Sea. Justo Ukondono showed himself very zealous, especially later, when Hideyoshi induced him to exchange Takatsuki for Akashi in Harima. Here, after a short time he would tolerate none but Christian subjects, and displayed anything but a winning Christian love towards the heathen. Through his influence Konishi (Don Augustin) Tsuno-Kami, the famous general and later the conqueror of Corea, was also converted to Christianity.

In several other central provinces also, particularly in Nagato and Suwô, there were many Christians. Their centre was Amaguchium (Yamaguchi), in Suwô, which at that time belonged to the Ouchi family. When, however, the government came into the hands of the powerful house of Môri, the Church lost its earlier hold here.

The oldest settlement of the Jesuits in Kiushiu, and one of their chief supports, was Funai in Bungo. The prince there, Jakaton-dono,² or King Francis, "our Mæcenæ," as the Jesuits called him (Ôtomo Yoshishige Bungo no Kami), whose acquaintance Mendez Pinto had made, who visited him again a second time from Goa, in 1553, in the company of missionaries, had, with many members of his family, gone over to Christianity.³ (He died in 1587.) In his capital there was a Jesuit college and a university, in which twenty Portuguese *patres* laboured and bestowed academical degrees. The disciples and friends of Loyola possessed besides, three monasteries near the town, and so long as Takata in Chikuzen belonged to Bungo, a house here also. When, however, Akidzuki (Kikuchi Takemasa?) had made himself master of this town, the Jesuits were expelled. In Chikugo there was a Church under the charge of a pious native Christian, as the prince of the country, Riôzôji,

¹ Called "Nambanji" by the pagans.

² Jakaton is a corruption of the Japanese *Jakata*, "the house of a noble," used by metonymy for a prince of a province. Dono means "Sir."

³ The Ôtomo family traced their original dominion in Kiushiu from a vassal of Yoritomo, who was rewarded with it. Under the Ashikaga they had extended their rule, so that in the time of Nobunaga it embraced nearly half of Kiushiu. Ôtomo was Kiushiu Tandai (Vice-Governor of Kiushiu). His great enemies were Kikuchi Takemasa of Chikuzen, Riôzôji of Chikugo, and Shimadzu of Satsuma, who robbed him of the greatest part of his possessions; the remainder the family lost in the persecution of the Christians.

tolerated no Jesuits in his dominions. In Hizen the princes of Ômura, Arima and Shimabara, were Christians, and great promoters of the new faith, so that about 1580, almost the whole population of the dominion of Ômura, *i.e.* nearly 50,000 souls, adhered to Christianity. The country had forty churches, the most splendid of them in Nagasaki, which place the Daimiô, on the advice of the Jesuits, had devoted in 1566 to intercourse with the Portuguese, and which was thus a source of great wealth to him. This Daimiô of Ômura was the first Christian prince of Japan, and a faithful adherent of his Portuguese friends, who named him Don Bartholomæus, the Christian hero. He is also called by them Xumitanda and Sumitanda. Sumitada was his *nanori*, or Japanese name.

The dominion of Arima embraced the largest portion of the peninsula of Shimabara, with the towns of Shimabara and Arima, as well as parts of Hizen proper, bordering in the south on Ômura. It belonged to a brother of Bartholomæus. He was baptized in 1576, and thereupon received the name of Don Andreas. In Arima there was a Jesuit seminary for young Japanese nobles, besides which the dominion possessed many churches and several other settlements of the Portuguese. When Riôzôji of Chikugo and Kikuchi of Chikuzen took away from the son of the Daimiô of Bungo the province of Higo, and divided it between themselves, there were here two settlements of the Jesuits and twenty churches. The entire population of the island of Amakusa had been converted. Moreover, the island of Xequi (Koshiki, near Satsuma) had a large Christian congregation with a church, which was in charge of a native preacher, as Jesuits, though they might visit it, were not allowed to live there. In Satsuma there were only a few Christians.

In the Gotô Islands, Christianity had at first found numerous opponents; but then, from about 1566 onwards, after Luis Almeida had cured the prince of a serious disease, and the latter had embraced the Christian faith, it made rapid progress. A few years later, however, Don Luis, the Daimiô, died, and was succeeded by his son, who was still a child in his minority. His tutor and guardian, a near relative, hated Christianity, and thus it came about that by 1581 there was neither church nor Jesuits in this dominion. The king of Firato or Firando (Daimiô of the island of Hirado) was, indeed, a heathen, yet did everything in his power to favour the propagation of Christianity, after his uncle Don John and his son Don Antonius had adopted it.

Of the four provinces of the island of Shikoku we have little information. It appears that, with the exception of Tosa, none of them was specially favourable to the new doctrine, and even here the conversion of the Daimiô, as has been mentioned above, caused much discontent.

From what has been here briefly stated as to the propagation of Christianity in Japan, it appears that in Kiushiu it had taken firmest root in the dominions of Bungo, Ômura and Arima. This

was further evidenced by the circumstance that the then Christian Daimiôs of these countries, at the instigation of the Jesuits, in 1582, sent an embassy of four persons to Pope Gregory XIII., in order to kiss his feet, and to Lisbon and Madrid to pay their respects to Philip II. This embassy reached Rome only in 1585, and returned home five years later. It consisted of Don Mancius Isto, the sister's son of Franciscus of Bungo, and Don Michael Cingina, the brother's son of Bartholomæus, Daimiô of Ômura and cousin of the prince of Arima. They were accompanied by two of the higher Samurai, who are designated as Don Julius Nacaura and Don Martin Fara (Hara?). They were all of them mere inexperienced youths of from fifteen to eighteen years of age. Father Alexander Valignan, who accompanied them, together with two other Jesuits, promised their relatives not to leave them, and even to conduct them back to their native land. Provided with letters from the three Daimiôs and with presents for the Pope, they embarked on the 22nd February, 1582, at Nagasaki, on a Portuguese vessel for Macao, had to face a violent storm on the way, and only arrived after seventeen days. Ships went from Macao to India but once a year, and they had to wait nine months for such an opportunity. Of three ships, the one in which they had come from Nagasaki was selected, and they put to sea on the last day of December, 1582, and after many dangers and difficulties reached Malacca at the end of January, 1583. Four days afterwards came the departure for Cochin and Goa. The voyage, which usually occupied a month, was on this occasion very unfortunate. Contrary winds, fever on board, and want of water were its unfavourable accessories. At length Valignan disembarked with his Japanese at Tricandur, here celebrated the Easter festival with the Jesuits of the place, and journeyed by land to Cochin, while his two Portuguese companions pursued the voyage thither in their ship. In April all reached Cochin, had to wait there until September, and then sailed in twenty days to Goa, where the Captain-General and the Fathers received them cordially. To the great regret of the travellers, Father Alexander Valignan, as Provincial of India, had to obey a mandate sent to him from Rome, and remain behind, so that henceforth Father Jacobus Mesquita had to undertake the office of conductor. On the 20th February, 1584, their departure for Lisbon took place in a richly and conveniently equipped vessel. The voyage was favourable throughout; they crossed the line on the 9th March, on the 10th May passed the Cape, and, after a short stay at St. Helena, finally disembarked at Lisbon, on the 10th August, 1584. The journey through Portugal, Spain and Italy resembled a triumphal procession, their reception at the hands of civic corporations, princes, and high dignitaries of the Church, leaving nothing to be wished in the cordiality and pomp which were displayed. It was desired on the one hand, to impress the young, inexperienced Japanese, to exhibit the splendour of the Church and the fruits of Christian

civilization, and on the other hand also to exhibit them as the ambassadors of mighty kings—for of the importance and the insecurity, of a Dainiō's position at that time, no one, except the Jesuits in Japan, had any idea—who came from afar to bend the knee before the victorious Church, and its head, the Pope. This great victory over a cultivated heathen people in a distant realm, which "had been won over and incorporated into the true fold of the Christian Church," excited, as John Mayer of Dillingen wrote in 1587, "far and wide in the whole Christian world, joy, exultation and wonderment." It was regarded as sent from God, the true "adjutor in opportunitatibus, in tribulatione, etc.," as a consolation to the Church, for the vexations and the trouble which German heretics had caused her. The Japanese might cry out to the Germans like Daniel to the children of Israel: "Sic fatui filii Israël, non judicantes, neque quod verum est cognoscentes, condemnatis filiam Israël?"¹

At Rome, Pope Gregory XIII. had died shortly before, and Sixtus V. had succeeded him in the Holy Chair. The answers to the letters of the Japanese princes are dated from Rome, the 26th May, 1585, in the first year of his pontificate. At the end of April, 1586, the embassy left Lisbon in a well-equipped ship, accompanied by seventeen more Jesuit fathers; at the end of May they reached Goa. Great was the reciprocal joy when the Provincial Valignan here greeted them again and expressed his intention to accompany them to Japan. They remained another ten months in Goa, left it on the 1st April, 1588, and landed in Nagasaki in 1590, after an absence of eight years. Great events had taken place in Japan during this period; the territorial relations and even the position of the Church had materially changed, and there were already many signs that the bright sky which had hitherto favoured the cause of Christianity would soon be overcast, and that great storms would burst forth.

Akechi Mitsuhide, the murderer of Nobunaga, soon reaped, together with his comrades, the reward of his treacherous act. His power lasted only for twelve days in Kiōto and the neighbourhood, but long enough to pillage and destroy many beautiful things which Nobunaga had collected or constructed.

The news of Nobunaga's death spread consternation everywhere. The Jesuits saw in it, and in the fact that his eldest son also, the king of Mino, who had been the first to bow the knee before his father's image at Adzuchiyama, had perished, a just punishment of God. One of them, Father Organtin, to whom the rebel Aquechi (Akechi) turned with the promise to assist the Christians even more than Nobunaga had done, if he would induce Justo Ucondono (Takayama) to espouse his cause, actually declared himself ready to do

¹ "Are ye such fools, ye sons of Israel, that without examination or knowledge of the truth, ye have condemned a daughter of Israel?" (Hist. of Susanna v. 48).

this (*Histoire de l'Eglise*, i. 490). It redounds to the honour of the Christian general, that he knew his duty better, and did not follow Father Organtin's advice. Even before Hideyoshi—who had hastily made peace with Môri and hastened to the capital with his army, in order to avenge his lord and patron and to secure his inheritance, the supreme power—could reach Kiôto, Takayama was there. To his Christian army of only 1,000 men Akechi opposed a hostile force of 8,000 men. Yet the former secured important advantages, which Faxiba (Hideyoshi), who was meanwhile approaching, carried further. The great band of robbers was soon dispersed; Akechi, its leader, fled, but was recognised by peasants and slain.

So far Hideyoshi had acted in concert and with the co-operation of Nobutaka, the king of Awa, as the Jesuits called him, who at the news of his father's death had likewise hurried to the spot with troops from Shikoku. He stood now in the foreground among the leading men of Japan—whose fortunes he had in his hands for sixteen years until his death in 1598—and restored internal peace to the country, an object for which his predecessors and masters had striven in vain. Nobunaga was a conspicuous personage, shrewd and accomplished as a diplomatist, brave and ready as a general, a man who ventured much and could count up great successes. But Hideyoshi, the peasant youth from Owari, who had no ancestors or relatives to reckon in his favour, and whose ugly face and unpolished manners did not recommend him, but who had been brought up by Nobunaga as his favourite, surpassed his old friend in many other respects and even in point of success.

At Nakamura, a village in Aichi-gori in the province of Owari, lived a humble peasant, named Kinoshita Yasuke, to whom a son was born in 1536, distinguished by a dark complexion and a ape-like head. This child grew into a perverse, impudent and daring youth, whose inclinations differed essentially from those of the lads of the place. While they cheerfully and obediently assisted their parents in the labours of the field, Yasuke's son gave the reins to his impudence and wit, and led a wild and useless life in the village. It happened that Nobunaga came to the place, saw the boy, was attracted by his bright roguish eyes and ugly face, and made him his *bettô* or groom. This was the beginning of Toyotomi Hideyoshi's career. It was not long before Nobunaga advised his *bettô* to become a soldier, and now he rapidly rose from step to step. He was a true military genius. His banner consisted of a bundle of bottlegourds. Wherever he raised it, there was victory. No wonder that men were glad to follow him; and he knew not only how to conquer, but how to use his victory. He was essentially distinguished from all his predecessors in power by the fact that he did not seek to avenge himself on those who had been his enemies, but pardoned them. His rule was much loved, for he administered justice without respect of persons, of name, rank, or even of services rendered.

Before we proceed to relate the most important events of the age of Hideyoshi, we may present a brief view of the distribution of power in the country, so far as it concerns us here. Hideyoshi had no inherited fiefs upon which he could support himself, but he had a well disciplined army blindly devoted to him, which abundantly compensated for this want. Nobunaga left to his descendants as direct inheritance, the provinces of Ōmi, Ise, Mino, Owari, Shinano and Kai, as well as portions of some others. In Hamamatsu resided Tokugawa Iyeyasu, the Mikawa-chief, as he is frequently called, over Mikawa, Tôtômi and Suruga. He had as his neighbour in Odawara, Hôjô Ujimasa,¹ the lord of the Kuwantô Hasshiu (eight provinces of Kuwantô, *viz.* Sagami, Musashi, Awa, Kadzusa, Shimôsa, Hitachi, Shimotsuke and Kôdzuke). Echizen was in the possession of Shibata Katsuiye, the general of Nobunaga previously mentioned, who had married a sister of Nobunaga. In Chiugoku the Môri family of Hagi (Chôshiu) had gradually obtained possession of ten provinces, and in Kiushiu the Shimadzu family had attained great power at the cost of Ôtomo.

Nobunaga had three sons, the eldest of whom had lost his life with his father in Kiôto. He left behind him a son called Hidenobu, whom the hereditary vassals of the family (the Ota clan in Ōmi) chose as successor to his grandfather, and endowed with Ōmi. Hidenobu was then three years old. Hideyoshi constituted himself his guardian and tutor and thus gained an external justification for the part which he was now determined to play. The third son, Nobutaka, a weakling, had been under the guidance of his uncle Shibata Katsuiye, governor of Shikoku, and now received the provinces of Mino and Owari. The second son of Nobunaga, named Nobuwo, had hitherto been on the side of the army against Môri. He now found a support in Iyeyasu, whose possessions bordered upon his own. Iyeyasu, as early as 1582, put an end to the anarchy which had taken hold of Kai, Shinano and Kôdzuke, and increased his possessions by the two former provinces, so that in 1583 the barons of five provinces (Mikawa, Tôtômi, Suruga, Kai and Shinano) appeared before Iyeyasu in Hamamatsu to offer him new year's greetings—vassals who from that time were faithfully devoted to him, as they found, under this distinguished person, the most effectual assistance in the protection of their interests.

Hideyoshi was at this time on good terms with Iyeyasu and Nobuwo. The last-named, in consequence of a disputed succession, besieged his brother in Gifu and took the place. Nobutaka fled, but soon found himself surrounded by the enemy, and seeing

¹ These Hôjô of Odawara were not a branch of the old Hôjô tribe, but descended from a trader from Ise, who had understood how to avail himself of the confusion in the time of the Ashikaga in order to found an extended feudal rule.

no hope of escape, took his own life. In 1583 his uncle and ally Shibata Katsuiye came to a similar end. After losing a battle against Hideyoshi in Mino, he fled into his province of Echizen, whither he was followed by the victor. In his castle at Kitanoshô, the modern Fukui, he was besieged by Hideyoshi. When Shibata saw that no help and no escape remained for him, he determined to put himself to death, that he might not fall into the hands of the enemy, and communicated this to his vassals, advising them to make peace, and thus to save themselves and their families. They all declared however that they wished even in death to be worthy of their lord, and to follow his example. Shibata Katsuiye thanked them; then, according to the Epicurean maxim, "Let us eat, drink and be merry, for to-morrow we die," had a great feast prepared. In the full career of festivity he communicated to his wife his determination to perform Seppuku, and recommended her, with the other women and children, to leave the castle and save her life. But the sister of Nobunaga would not yield in heroic spirit to her brother and her husband. With tears in her eyes she thanked him for all the kindness she had received, and begged for the honour of being allowed to die with him. The rest of the women followed her example. Upon this Shibata had the castle set on fire, dealt the fatal stroke to his wife, the children and female servants, and finally ripped himself up. The other combatants followed his example. The flames consumed the castle and the bodies.

In a temple near Fukui, under some old pines, is still shown the tomb of Shibata Katsuiye, together with various memorials, such as portions of his armour, which were found after the conflagration. The history of this tragical end of a peculiarly heroic race has been handed down in Fukui from generation to generation, says Griffis. It agrees with what the Jesuits have reported of the Xibatadono (Shibata-dono, Lord of Shibata).

After these occurrences in Mino and Echizen, Hideyoshi returned to Kiôto, and now showed that he was not only able to command armies and win battles, but was also anxious to promote the works of peace. The capital under his direction became prosperous again and was beautified by many conspicuous buildings. The bed of the Kamo-gawa was improved and laid with flags of stone. The most imposing of the bridges leading over it, moreover, the Sanjô-bashi, is Hideyoshi's work. He fortified Fushimi, the outwork of Kiôto, and in place of the earlier monastery in Ôzaka, which Nobunaga had destroyed, built a strong fortress, in which he frequently resided. He thought not only of Kiôto but also of Ôzaka, and thus laid the foundation of the great importance of this town as a commercial emporium of the empire. The flourishing Nagasaki he took in 1540 from the Daimiô of Omura and made it likewise an imperial town. His government was very popular, as he was placable towards his foes, restored peace to the country

and re-established law and order. In 1586 he received from the Mikado the dignity of a Kuwambaku¹ or Regent, an office which hitherto had been held only by the Fujiwara family. How with all his shrewdness, shamelessness and selfishness, he could attain this position is incomprehensible. To these faults of his character was added, especially in the last years of his life, great sensuality. As he often changed his wives, so too he changed his name. His parents called him Hiyoshi-marō, as a soldier he was called Kinoshita Tōkichirō, and when he had become a famous general he called himself from mere caprice Hashiba, which he formed from syllables of the names of two other generals, Hiwa (Ha) and Shibata. The Jesuits wrote it as Faxiba, and instead of Kuwambaku wrote Cambaku-dono. His humble origin was a stumbling-block to himself and others. He tried in vain to trace his origin from a Kuge-family, and at length had the satisfaction of receiving from the Mikado the grant of an old family name, Toyotomo, upon which he called himself Toyotomi Hideyoshi, by which name he is usually known in history. At the same time the name Taikō-sama is very common. This dates from 1591, in which year, following the practice of the country, he abdicated in favour of his adopted son Hidetsugu, without however letting the conduct of the government out of his hands. As Kuwambaku he was able to induce the two most powerful feudal princes of the country, Mōri of Chōshiu and Iyeyasu, to come to Kiōto and do homage to the Mikado. The good understanding existing at this time between him and Iyeyasu continued until his death. It had been disturbed soon after the defeat of Shibata and Nobutaka in 1584, while Hideyoshi and Nobuwo were in Ōsaka. The latter considered that his rights had been infringed by Hideyoshi, and appealed for assistance to Iyeyasu. He afforded it, after indignantly rejecting the proposal of his rival to divide the provinces of Mino and Owari, the possessions of the Nobuwo. In the conflicts which now followed, Hideyoshi had on the whole the worst of it as against Nobuwo and Iyeyasu, and found that here he had a rival at least equal to himself, so that it appeared advisable, under all circumstances, to attempt a reconciliation. This was first accomplished with Nobuwo, and then, through his intervention, with Iyeyasu also, though this was not easy, and was brought about only by Hideyoshi's offering him—for he had become a widower—his sister for a wife. Nevertheless Iyeyasu trusted his brother-in-law so little, that he only decided on travelling to Kiōto after Hideyoshi had sent him his mother to Okazaki as a hostage. Iyeyasu received in Kiōto a higher rank from the new Mikado Goyōsei-Tennō (the 106th), and seemed to be satisfied. The Mikado was asked to order a splendid

¹ Kuwambaku meant the regent of the country by commission from the Mikado; the Sesshō governed during the minority of the Mikado, and was therefore a kind of guardian.

procession, to which he consented, and which his three chief supports, Hideyoshi, Iyeyasu, and Nobuwo, furnished forth with great pomp. In advance of the imperial carriage rode Minamoto Iyeyasu and Taira Nobuwo, while Toyotomo Hideyoshi with twenty-seven other feudal lords brought up the rear. Then on the next day Hideyoshi took his seat at the right of the throne, and deputed his relative Toyotomi Hideaki to invite Iyeyasu and his retinue to do homage to the Mikado. After this had been done, and the Tennô had assigned them high positions, he returned to his usual residence.

Hideyoshi had also repeatedly issued invitations to Hôjô Ujimasa in Odawara, to present himself at court, but without success. He excused himself by pleading his advanced age, while his son Hôjô Ujinawo offered a different plea. They may well have felt that the time was drawing near when they would have to struggle to retain their great territory, which Iyeyasu was striving for, and that it was better to prepare for the conflict by forming alliances and other means, than to bow before Hideyoshi. The latter sought and finally obtained the permission of the Mikado to fit out an expedition against the Kuwantô. He summoned 47 provinces to send up their auxiliary troops to the appointed place in Kiôto, entrusted the safety of the town to Môri Terumoto, and of Ôzaka to his relative Toyotomi Hideaki. On the first day of the third month, 1590, Hideyoshi presented himself at court, and received from the Mikado the insignia of the chief command, staff and sword. Then he proceeded eastwards at the head of a well-equipped army of 170,000 men. Twenty-six days later he arrived at Shimadzu in Suruga, and joined Iyeyasu the next day. Ujimasa, the enemy, had meanwhile neglected nothing to place his eight provinces, and above all the capital Odawara, in a position of defence. At the advice of the Mikawa chief the army of the allies was separated into three divisions. One was to attack Nirayama in Idzu, a second Yamanaka (also called Hagi-no-yamanaka, second fortified town in Sagami), while Iyeyasu himself intended to fall directly upon Odawara, straight over the Hakone pass, which was strongly fortified, and Hideyoshi was to remain in reserve. Nobuwo commanded the 30,000 men against Nirayama, whilst Hidetsugu, at the head of 50,000 men, set out at night for Yamanaka. The enterprise was crowned with success on all sides; the vassals of Hôjô did not hold together, so that Hideyoshi and Iyeyasu soon stood before Odawara, besieged the castle, and took that also. Ujimasa was taken prisoner and executed, but his son Ujinawo, and his followers, were sent into exile in the monastery town of Koya in Kii. Iyeyasu having obtained the eight provinces of the Kuwantô, made a journey through his new territory, and by the advice of Hideyoshi removed his residence to Yedo. This happened in 1590. Soon the insignificant fishing village became a flourishing town, the town of the Tokugawas. On New Year's day, 1591, the vassals

of the eight provinces of the Kuwantô presented for the first time their good wishes to their new feudal lord.

In the autumn of 1590 Hideyoshi returned to Kiôto, rendered an account to the Mikado of the pacification of the Kuwantô, and gave him back sword and staff. The temple of Janus was therewith closed, and peace reigned throughout the empire. The most powerful princes, like Iyeyasu, Môri and Shimadzu, or Kuwantô, Chôshiu and Satsuma, as they are also called, after their possessions, were pacified and well disposed towards Hideyoshi's important ulterior designs. These took a wide range. To chastise and bring back Corea to its long-forgotten allegiance, even to conquer the mighty realm of China, and to become lord of the world (in the Japanese sense), had been the dream of his youth and his highest aim as a man. In vain had he entreated Nobunaga to give him the revenues of Kiushiu only for one year, and his consent, in order to strive for the goal. He had not lost sight of it when he obtained, with his sword, the succession of Nobunaga, and when his attention was chiefly claimed by many events in Japan itself. Now he proceeded to the execution of his purpose. True, every valid ground for making war upon the peaceful Coreans was lacking; yet his insolence found ways and means to create one, in order, in some degree at least, to extenuate what boundless vanity dictated to him. Already in the year 1582, the Daimiô of Tsushima had sent, at the instigation of Hideyoshi, a certain Yuyaji Yashiro to the Korean court to complain of the remissness of Corea, and to request that the embassies should be sent to Japan as had formerly been customary. Yashiro's unseemly attitude and provoking language occasioned his dismissal. After his return he had to pay the penalty of his failure with his life. His family suffered the same punishment. Soon after Hideyoshi sent the Daimiô of Tsushima (Yoshitoshi by name) himself, accompanied by two of his vassals. The Korean government, however, before entering into any negotiations, demanded back their subjects who a few years before had been carried off from their coasts by Japanese pirates. These were actually discovered and brought back. The king now received the Japanese embassy most cordially, and in return despatched one with it to Japan, which was richly provided with presents for the court. This happened in the spring of 1590. Three months later the ambassadors arrived in Kiôto. Hideyoshi was still in the field, and made them wait an unsuitably long time for his return. At length they were received by him. The letter which he gave them to take to the king of Corea is well known, as also their report of the reception. The following passages from the translation by W. G. Aston,¹ may find a place here:

"I will assemble a mighty host and invading the country of the

¹ Hideyoshi's invasion of Corea, by W. G. Aston. *Japan Weekly Mail*, 16th March, 1878; also in *Trans. of Asiatic Soc. of Japan*, vol. vi. pt. 2, p. 232.

Ming, I will fill with the hoar-frost from my sword the whole sky over the four hundred provinces. Should I carry out this purpose, I hope that Corea will be my vanguard. Let her not fail to do so, for my friendship with your honourable country depends solely on your conduct when I lead my army against China."

In the report of the ambassadors, however, we read: "Hideyoshi is a mean and ignoble-looking man; his complexion is dark and his features are wanting in distinction. But his eyeballs send out flashes of fire enough to pierce one through. He sat upon a three-fold cushion with his face to the south.¹ . . . The refreshments offered were of the most frugal description. . . . He seemed to do exactly as he pleased, and was as unconcerned as if nobody else were present."

Riyen Koku-ô (king) of Corea saw from the tone of the letter and the report of the returning ambassadors, that war with Japan was inevitable. Hideyoshi had determined upon it, therefore the attempts which Yoshitoshi of Tsushima still made to bring about a friendly agreement were of no avail, for he aimed only at inducing that party to yield which had committed no offence, and spoke merely of the enormous preparations which Hideyoshi was making. In the answer which the ambassador brought to Kiôto, the project of conquering China was compared to an attempt to measure the ocean with a cockle-shell, or to a bee which strives to sting a tortoise through its coat of mail.

These comparisons roused Hideyoshi's wrath. He wished to lead the army himself of which the equipment was being pressed on with redoubled zeal. Therefore he resigned the office of Kuwambaku to his adopted son and nephew Hidetsugu, though with only a semblance of power. In reality he held the reins of the government in his own hands until his death. With this change is connected the last alteration of his name. From this time he called himself Taikô (great gateway), a title which was borne indeed by every Kuwambaku who had retired after his term of office, but which, with the addition "sama," lord, is only applied to him by the Japanese people or in history.

The year 1591 was spent, on both sides, in vigorous preparations, but with very different results. Corea had enjoyed peace for two hundred years, and war was unknown there. It was unacquainted with fire-arms, and in this respect too was at a great disadvantage compared with Japan. The position of Japan was quite different. Since the chief aim was not war against Corea, but conquest of China, preparations were much more extensively carried on than would otherwise have been necessary. The chief burden fell on Kiushiu. Each Daimiô must equip, for every 10,000 Koku of rice which his lands brought in, 600 men, and each one whose possessions bordered on the sea, two great junks besides. For their crews

¹ An assumption of royal state in the East.

each fishing village had to furnish one sailor for every ten houses. The rendezvous was Karatsu in Hizen, then called Nagoya. Many writers estimate army, sailors, and all seafaring people included, at 480,000 men, others at 300,000, figures which probably exaggerate considerably. As commanders-in-chief Taikô-sama appointed Konishi Yukinaga Tsu no Kami and Katô Kiyomasa.

According to the lowest estimate of Japanese authors, 130,000 men crossed to Corea, and were followed in a few months by 50,000 more. Even these figures however appear to be exaggerated, for one can well imagine that all the junks available would not have sufficed for the transport of so great a host. More credible appears to us therefore the statement in the *Histoire de l'Eglise*, according to which the one army under Konishi numbered 40,000 men. If we suppose the second to be of equal strength, it follows that the invading host numbered 80,000 men, which would still be a large army, considering the time and circumstances. Taikô-sama had in vain endeavoured to obtain for the transport two large Portuguese ships which lay at the time in the harbour of Nagasaki.

One of the commanders, Admiral Konishi Yukinaga, or as the Jesuits call him, Don Augustin Giacuran-done, was the son of a druggist, and thus, like Taikô-sama, an upstart. While the latter bore the gourd, so the former bore on his standard a medicine-case of paper such as may still be seen on the shield of the apothecaries in Japan. It has already been mentioned, that he together with his parents had turned Christian in 1584. His army consisted almost entirely of Christians. The princes of Bungo, Ômura, Arima and others commanded under him.

Katô Kiyomasa, the commander-in-chief of the other and heathen army, hated the Christians and despised their leader particularly, because of his humble origin. To him Taikô-sama gave the flag, which he in his time had received from Ota Nobunaga against Môri, whilst he presented Konishi with a beautiful horse, that he might gallop over the bearded savages (Coreans). He himself had given up the idea of taking the chief command, principally on account of his aged mother. At last everything was ready for the departure. It took place amidst the loud jubilations of those who remained behind. Konishi landed in Corea in the middle of April, 1592, three days before his rival Katô. Forthwith he took Fusankai (the port Fusan), opposite Tsushima, as well as a neighbouring castle, Torai by name. When Katô arrived, he found the principal work already accomplished. His pride was thereby deeply wounded and his hatred of Konishi and the Christians found fresh food.

By different routes both armies marched against the capital. Nowhere did they find serious resistance. One of the chief successes of Konishi was the taking of the town of Shang-chiu (Sangju) in the province of Kung-shang (Kyöng-sang). Here they found

amongst the captives one who knew Japanese. Konishi sent him to the capital with a letter of Hideyoshi and a communication from himself to the minister of foreign affairs. His letter ran thus, "The governor of Ulsan, taken prisoner in Tōrai, was set free, that he might carry to his government a letter, to which no answer has yet been received.¹ If the Coreans wish for peace, let them send Tokukei (a certain official) to Chung-ju, that he may be there on the 28th inst." The Coreans, desiring peace, sent the desired negotiator with Ulsan, the interpreter. The latter, however, on the way fell into the hands of Katō's army and was executed as a spy. In consequence of this Tokukei gave up his mission and returned to the capital. Chung-ju on the upper Kang-kiang was looked upon as one of the strongest fortresses of the kingdom, so that the news of its fall spread great terror in the capital. Every one who could fled northwards to the Chinese frontier, even the royal family. This happened seventeen days after Konishi's landing. Three days later the two hostile generals arrived in the open capital Hanshon (Hang-sōng or Säul), united their armies and advanced further northwards as far as the Rinchinkiang, where a Corean army barred the way. They feigned flight, thereby enticed a great part of the Coreans across the river, then fell upon them and completely defeated them. As the disagreement between Konishi and Katō was increasing, they determined to separate their armies again, and decided by lot (a proceeding still very popular with Japanese of all ranks) which route each of them should now take. To Katō fell the north-eastern province Hankion (Ham-gyōng-do), which extends along the Sea of Japan. He marched through the whole province, had many hard fights to undergo, made captive two princes and many other Coreans of high position, and finally entered into quarters in the fertile lowlands round Broughton Bay.

Konishi's lot had fallen to the north-western province Pionan (Pyōng-o-do). He accordingly moved northwards towards the Tatong-Kiang (Tai-dong-gang) on the northern banks of which, near Ping-shang (Pyōngjang), the Corean army had again made a stand. Here Kuroda, and Yoshitoshi, the Daimiō of Tsushima, joined him with their troops. Konishi made a fresh attempt to decide the Coreans in favour of peace. The Japanese desired an open road to China. But the Coreans, daily expecting Chinese help, rejected the Japanese demand. Ping-shang was well fortified, and as the Japanese had no boats to cross the river, the attack did not follow until after long preparations. The king fled further northwards to Wichu (Wi-ju) at the mouth of the Yalou and on the Chinese frontier. During his flight, he heard that Pingshang too had fallen, which tidings spread new terrors. The taking of

¹ The governor, who had been afraid to appear in the capital as a liberated prisoner, pretended that he had escaped, and accordingly suppressed the letter.

Ping-shang was preceded by a night surprise by the Koreans, for which Konishi was not prepared, and which, in spite of its being imperfectly executed, caused him considerable losses, and would have been still more serious in its consequences for him, if Kuroda had not come to his help and driven the enemy back over the river. The Japanese now followed and conquered the fortress. Great stores fell into their hands.

Up to this time the governor of the neighbouring Chinese province Laotung had remained merely an attentive observer. Not until the Koreans became more pressing in their entreaties for help, and promised to place themselves under Chinese sovereignty if they were assisted, did China send a small auxiliary corps of 5,000. This marched forward to Ping-shang, was let into the town by the Japanese, and here in its narrow streets so utterly defeated, that the remnant, without their general, who had fallen, took to flight and came to a halt only when they reached Laotung.

About this time an event pregnant with consequences occurred in the south of Corea. Konishi had ordered to Ping-shang the Japanese fleet, which until now had lain inactive at anchor not far from Fusan. Before this was accomplished, the Korean fleet lured the Japanese on to the open sea, attacked it on all sides, and gained a great victory over it, so that the remaining Japanese ships were obliged to retire to Fusan-kai. This event gave the Koreans new courage. Everywhere their resistance against the invaders was now aroused.

The first defeat of the Chinese at Ping-shang led them to make new preparations, but meanwhile to attempt to conclude peace with Konishi. An ambassador from Peking, Chin Ikei by name, whose full powers to negotiate with Konishi were of a doubtful kind, obtained from the Japanese an armistice of fifty days. On his way back to the Chinese capital he came upon an army of 40,000 men, which was about to come to the assistance of the Koreans. Their leader, Li Joshô, is described as a boastful but cowardly man, who preferred treachery and other objectionable means to an open fight. When towards the end of 1592 he reached Shunan in the province of Kionshan (Pjöngan), with his army, he sent word to Konishi that Ikei had arrived and was ready to negotiate further with him. The Japanese leader immediately sent an escort of from twenty to thirty men to fetch Ikei and accompany him to the Japanese camp. Li (Ri) Joshô, the Chinese commander, of whose approaching army the Japanese had no suspicion, caused this escort to be suddenly attacked and cut down by an ambushade, so that only a few escaped to report the occurrence to Konishi.

The Japanese garrison of Ping-shang (Pean in the *Histoire de l'Eglise*) was at this time in a very bad condition. Unacquainted with the movements of the enemy, who had seized and executed most of their spies, and who, on their side, were well instructed as

to all proceedings within the fortress, without reinforcements from the mother country, they suffered much from sickness and want, and held out only by their good discipline and by surpassing courage. Their provision trains were repeatedly surprised and destroyed by the Koreans, who had laid waste the whole country around, so that every one was longing and praying for a final deliverance from this state of things, such as only peace could bring about. The Chinese army, reinforced by Korean troops, soon met the Japanese near Ping-shang. These showed their old valour, but were obliged, in spite of the victory they gained over the enemy, to retire into the town, were again attacked here, and driven into the fortress. True, Konishi succeeded in driving the enemy out of the town again, but this was only a transitory success. The three days of fighting had so reduced his army that he could no longer hold his ground. He hastily retreated in the depth of winter to the next fortress to the south, which he had left in the hands of the prince of Bungo, and where he hoped to find new support. The latter had ill performed his duty, had given up two of the army's points of support, and retired to the third fort south of Ping-shang, which Konishi had built. So Konishi was obliged to march on night and day with his weakened army, till at last on the third day he fell in with the prince of Bungo who was well provided with troops and provisions, when he determined to spend the winter here, and in the spring to move further north towards Pingshang.

Taikô-sama, who was apprized of all these occurrences, deprived the Daimiô of Bungo¹ of his command, because he had not shown himself worthy of it, commended Konishi and the other leaders, exhorted them to hold out till the spring, when he himself would bring help, and expressed his expectation that the enemy would leave them unmolested. However, in this he had deceived himself. The enemy marched forward with a numerous army; Konishi advanced to meet him, and they fought with great fury the whole day, but, in spite of considerable losses on both sides, without any decided result. Meanwhile, when night came on, the Chinese and Koreans offered an armistice and negotiations for peace, which were very welcome to Konishi.

According to the agreement which was now brought about, the Japanese were to retire to the twelve fortified places on the coast conquered by them, and, as long as the negotiations for peace continued, to lay down their arms. Konishi, accompanied by one Chinese and two Korean ambassadors, immediately travelled to

¹ This was the son of Ôtomo Yoshishige, who had received the Jesuit fathers in so friendly a manner, had himself professed Christianity, and had greatly extended his possessions; but towards the close of his life had lost the greater part of them in consequence of the incapacity of his son. The latter, called by the Jesuits Constantine, was a weakling and an apostate, who forsook Christianity when he feared to lose his territories, and again embraced it when his cousin returned from Europe.

the court of Taikô-sama, to negotiate further as to the conditions of peace. The Japanese made the following demands: 1. That Corea cedes to Japan the five of its eight provinces which lie to the south. 2. That the Emperor of China sends Taikô-sama one of his daughters for a wife, in order to confirm the bond of peace and friendship between the two empires. 3. That China and Japan renew their old commercial relations with each other. 4. That China and Corea pay to Japan a yearly tribute, the amount to be settled later.

The ambassadors were most cordially received, and nothing was spared that could bring before them the power and the splendour of Taikô-sama's rule. After everything relating to the preliminaries had been arranged, Konishi returned to Corea with the foreign ambassadors, and a new army of fifty thousand men, which was to release the old troops, now ordered home. An official of Taikô-sama's was to accompany the Chinese ambassador to the court at Peking, in order to treat further concerning peace. Meanwhile the Japanese in Corea built two new fortresses, in order to be prepared for the fresh outbreak of hostilities.

After some time, in consequence of the efforts of Konishi, a new Chinese embassy arrived with a great train and rich presents in the Japanese camp, in order to proceed to the court of Taikô-sama. Konishi himself brought the news to Taikô-sama and thereby gave him great satisfaction, for it had long been his ambitious desire that the whole world should see how China bowed before him. The great preparations which he had made for the reception of the embassy took much time, but finally, like so many splendid buildings which he had erected, were destroyed by violent earthquakes in the summer of 1596. At last the embassy arrived, delivered the presents and a letter from the Emperor of China, which contained, not as Taikô-sama's pride had hoped, and his flatterers had represented to him in advance, a humble subjection to his will, but, instead, the demand that he should demolish the fortresses in Corea, and withdraw his troops. This enraged him. The embassy was very ungraciously dismissed, and Konishi was ordered to return immediately to Corea, and continue the war most vigorously. The enemies of the general-in-chief seized the opportunity to bring him again into suspicion with Taikô-sama, as if he were to blame for this insult, whereas he probably had no suspicion of the contents of the letter, and was guided only by the universal desire for peace. Katô Kiyomasa (the Toronosuke of the Jesuits) was at the head of these intrigues against Konishi and the Christians, especially since he had been recalled on account of his incapacity. Now he obtained a new command in Corea. Konishi received considerable reinforcements, which were sent from Kiushiu under the command of Kuroda Yoshitaka, with which he successfully carried on operations, until the death of Taikô-sama in 1598 occasioned the recall of the troops.

The most peculiar of the many trophies which were brought back from Corea consisted of the ears cut off from several thousand fallen enemies. It had been the usual practice to cut off the head of the slain antagonist, and to carry it away in triumph, as the half-civilized peoples of the Balkan peninsula are accustomed to do; but in Corea, in consideration of the distance from home, only the ears were cut off and salted down. These thousands of ears of slain Coreans were buried in Kiôto. On the mound of earth heaped above them, a stone monument, called Mimidzuka (ear-monument), was raised, which in our own days still stands as a memorial of that time.

Several princes of Kiushiu, such as Satsuma and Hizen, brought back to their territories more valuable remembrances of the great expedition, namely Corean potters, who received from them the privileges of Samurai, and were settled in order to introduce the famous porcelain and faience industries. Descendants of these people still live in Arita and at Nawashirogawa, or Tsuboya, the "Corean village," in Satsuma. During the war, Coreans had also been brought to Kiôto, Hagi in Nagato, and other towns, with a view to propagate the more delicate ceramic arts.

In the last decade of the sixteenth century, the time of the unopposed power of Taikô-sama, occur, besides the expedition against Corea and China, a few other remarkable events, which must here be cursorily mentioned. These are the death of Hidetsugu, and the first Christian persecutions.

It has already been stated that Hideyoshi, in default of children of his own, adopted his nephew Hidetsugu, and, in the year 1591, when he was on the point of going in person to Corea at the head of the army, had the office of Kuwambaku conferred upon him. He appears to have regretted this step as early as the year 1592, when one of his wives, a lady of good family, the Princess Azai of Ômi, daughter of Shibata Katsuiye, presented him with a son, whom he named Hideyori.¹ Governed as he was by covetousness and unbounded ambition, occasions soon arose to stir up his jealousy against Hidetsugu. This was followed by signs of mutual distrust and precautionary measures of different kinds, which proved that uncle and nephew lived in fear of each other. Taikô-sama at last proceeded to the execution of his plan for getting rid of his troublesome nephew the Kuwambaku. He one day sent to him five adjutants, each of whom was to bring an accusation against him and who delivered him a categorical summons to leave his castle in Kiôto immediately, and to betake himself to Fushimi with no other followers than ten of his pages, in order to defend himself before Taikô-sama. Taikô-sama sent him on the same day into exile at the monastery Kôya-san in Kii. This happened in 1594.

¹ People were universally of the opinion that Hideyori was the son of somebody else, though Taikô-sama himself looked upon him as his legitimate son.

A year after, five of the pages attending him were recalled, Hidetsugu was commanded to perform Seppuku, and obeyed when he saw how heroically his five young comrades shared the same fate. Taikô-sama did not content himself with these victims, for his wrath fell upon all who had stood in close relations with Hidetsugu; all the counsellors, wives and children of the unfortunate prince were likewise put to death.

Contemporaries of Hidetsugu, especially the Portuguese Jesuits, describe him as a man of great mental gifts, with a clear understanding and judgment, wise, prudent and discreet, with polished obliging manners, desirous of learning, and favouring Christianity. But these good qualities were obscured by an incomprehensibly barbarous feature of his character,—unparalleled heartlessness and cruelty. Hidetsugu knew no greater pleasure than to kill human beings, to cut off the heads of those condemned to death, or to tear them limb from limb. It is even reported that he opened the bodies of pregnant women in order to see the position of the children.

The relations of Hideyoshi with the missionaries and Christianity appeared to take a friendly shape at the commencement of his rule; but the favour which he at that time showed the Portuguese fathers lasted only as long as the anxiety to establish his government claimed all his attention. His first hostile proceedings against the new doctrine occur in the year 1587. At this time there were in Japan, according to the *Histoire de l'Eglise*, 200,000 Christians. Persons in a superior position of life, kings (Daimiôs), princes, generals, high officials at court, in a word, the flower of the Japanese nobility, were Christians, says our authority, with a slight exaggeration. Nevertheless the influence of the enemies of Christianity was predominant at court. It found a powerful support in the unbounded vanity and sensuality of Taikô-sama, which Christianity of course condemned. In July, 1587, while he was staying at Takata in Chikuzen, the upstart felt himself insulted—according to the account of the Jesuits—by a Portuguese captain who would not sail into the shallow bay to please him, and by the chastity of some beautiful Christian maidens of Arima who had rejected his overtures. Then an edict appeared suddenly which commanded all Jesuits to quit the country within twenty days. When it was represented to him that no ship was leaving during that period, he directed the fathers to repair to the island of Hirado, and to wait there till the next opportunity of sailing presented itself. He granted them for this a delay of six months. To Justo Ucondono (Takayama, Daimiô of Akashi), who, in his zeal for Christianity, had been harsh towards his heathen subjects, he offered the choice of renouncing Christianity or his dominion. Ucondono chose the latter, declared himself ready to die for his faith, and found, with his family, a shelter in the territory of his friend, Admiral Konishi, near Ôzaka. The latter and the commander of the cavalry, Don Simon Condera (Kuroda Kambrôye),

Taikô-sama retained in their appointments, because he knew their devotion, and prized their services too highly to lose them on account of their religion.

The fathers, sixty-five in number, according to command assembled in Hirado, but determined to remain in the country, to avoid everything which could further provoke the persecutor, to close their churches and chapels, to cease preaching publicly and to celebrate no processions. At the invitation of the Christian princes they distributed themselves through their dominions, preached, and exhorted the Christians who assembled in private houses, and administered the sacraments to them. Taikô-sama, although he knew this, allowed them to continue; he destroyed several churches at Ôzaka, Sakai and elsewhere, but did not carry matters to extremities. Don Constantin, the young king of Bungo, whose loose life ill accorded with the doctrines of Christianity, acted otherwise. After he had lost almost all his possessions in consequence of his military incapacity, and had then, in the year 1586, recovered a part of them by the bravery of his uncle and the help of Taikô-sama, he feared, on the publication of the edict against the Christians, to lose his dominions if he did not at once renounce Christianity and also compel his subjects to return to Paganism. Under the influence of a heathen uncle, who hated Christianity, he sought to out-do Taikô-sama, and persecuted the Christians most cruelly. In Funai, where the gospel had found its first zealous followers, one of them became the first martyr. This was an old man of seventy, Joram Macama by name, a brave soldier, who was executed on the 27th of July, 1589, by command of the prince. His wife and children were the next who suffered death. During this period of the first persecutions, the steadfastness of most of the Christians showed itself in such a way as to demand the utmost admiration. In spite of these persecutions the number of believers increased surprisingly, according to all reports by 10,000 yearly.

Everything would perhaps have returned to the right track, if a new enemy had not arisen against Christianity from quite a different quarter. In the year 1592, Lupus di Liano, an ambassador of the governor of the Philippines, came to complain to Taikô-sama of some Portuguese merchants. On his return voyage he went down with his ship. A year after a new ambassador followed him, accompanied by four Spanish Franciscans. They asked Taikô-sama's permission to see his palace, and to build themselves a house in Kiôto. Both requests were granted them in their capacity as ambassadors, but under the express condition that they should not preach. "They will not act contrary to my command if they are wise; if not, I will teach them to laugh at me," Taikô-sama answered the governor of Kiôto, who expressed some anxiety. But the mendicant friars troubled themselves neither about the prohibition nor their promise, preached publicly in their vestments, and excited men's minds by the violence of their language and the

discord which they brought even into the Christian community. Moreover they had other brothers of their order sent after them, erected a church in Kiôto, one in Ôzaka, and were just founding a third in Nagasaki, when Taikô-sama, enraged to the highest pitch by their conduct, put a stop to their proceedings by force. He renewed his edict against foreign missionaries, had the houses of Franciscans and Jesuits in Kiôto, Ôzaka, and Sakai surrounded, their inmates taken prisoners, and led through the principal streets of these towns, the pillory, on the board of which was the following inscription, being carried before them by an official :

“Taikô-sama.—I have condemned these people to death, because they have come from the Philippine Islands, have given themselves out as ambassadors, which they are not, and because they have dwelt in my country without my permission, and proclaimed the law of the Christians against my command. My will is that they be crucified at Nagasaki.”

This sentence was carried out on the 5th of February, 1597. Three Portuguese Jesuits, six Spanish Franciscans, and seventeen native Christians suffered death, meeting it steadfastly and joyfully. In 1862 they were canonized by Pope Pius IX. with the utmost pomp.¹

In the eyes of Taikô-sama these men died, not on account of their religion, but because they had disregarded his command, and because he saw in them a great danger to the independence of Japan,—a point of view which partly explains the later persecutions also, and in which Taikô-sama was further confirmed by a Spanish sea-captain. The latter had shown to him, or his officials, a map of the Spanish dominions, and in answer to the question how Spain had obtained possession of such enormous territories, had replied that the usual course was for his king first to send out priests to convert the heathens to Christianity, then soldiers to afford to these Christians his protection, and to conquer the country with their help.

In the conflict with Corea and China, which had meanwhile broken out afresh, Taikô-sama saw the only expedient for ridding himself of the Christians, and for removing the danger to his rule, of which he was continually becoming more conscious. A great number of them fought, as already stated, under Konishi. If they conquered the country they might remain there, found for themselves a new home, and draw to them their relatives and followers ; if they were overcome he was likewise freed from them. According to his view then, it was above all of importance to get rid of the influence of the Jesuits. We cannot accuse him, the contemporary of Philip II. of Spain, of any great harshness, when he ordered the

¹ Pope Urban VIII., at the suggestion of the Franciscans, had already resolved to do so in 1627, but was prevented from carrying out his intention, as the Franciscans found the cost, estimated at 52,000 Roman dollars, to be too great.

governor of Nagasaki to send the Jesuits in a ship to China, with the exception of a few who were conditionally allowed to remain in Nagasaki. This command, too, was only partially executed, since of 125 Portuguese (priests and coadjutors of the Society of Jesus) eleven took ship for China in the year 1598, but the rest remained in retirement in Japan. They had warm friends among the higher officials, who gave them secret information, and, on the other hand, sought to mitigate the wrath of Taikô-sama.

The latter had quickly played himself out. The dissolute life, to which he had given himself up more and more of late years, had shattered his health. An attack of dysentery, which set in at the end of June, 1598, and never left him, brought on his death in September of the same year. He partly used the time of his illness in preparations for ensuring his inheritance to his child Hideyori, now six years of age. Then he collected all his vassals who were not with the army in Corea, and made them swear fealty to his son and his house. As he mentally passed in review the other princes of the country, one especially occurred to him whom he must attach more closely to his house, and who must be made to serve its interests, if these were to be preserved. This was Tokugawa Iyeyasu (Gieiaso, as the Jesuits wrote), the Lord of the Kuwantô, whom he looked upon as of all the princes of the country the most powerful, the bravest, the noblest, the most esteemed, and the best beloved by his subjects. He invited him to stay with him at Fushimi, lauded him highly in a speech made in presence of the assembled court and all his great dignitaries, then asked him to support his son, to conduct the affairs of the country during the boy's minority, and hand over the administration to him. That the matter might be rendered more certain and satisfactory on both sides, Taikô-sama proposed a marriage between Hideyori and Iyeyasu's granddaughter, which, although the parties were still young children, was shortly after celebrated with all solemnity.¹ Iyeyasu was apparently much moved by all this. He reminded Taikô-sama how he, the lord of the Kuwantô, at the death of his brother-in-law Nobunaga, had only possessed the province of Mikawa, but by the help of his friend had soon acquired three others. Only a short time afterwards, Taikô-sama's kindness had procured for him the eight provinces of the Kuwantô. In view of so much favour it was naturally the duty of himself and his successors to serve Taikô-sama's son faithfully, and to prove themselves worthy of the great confidence that was placed in them.²

¹ Iyeyasu had married a sister of Taikô-sama, his son Iyesada an adopted daughter of the same prince, the sister of Hideyoshi's wife Azai. By the new marriage between Hideyori and the daughter of Iyesada the ties between the two houses were drawn still closer. Though indeed, the history of Japan affords hundreds of examples to show that such family relationships were of very slight importance when other interests were concerned.

² According to older accounts Iyeyasu was by no means so accommodating as he is here represented, according to the "History of the Church."

However, Taikô-sama did not hold the future of his son to be thus sufficiently secured. Besides Iyeyasu, he further appointed four Tairô (chief-elders) for his son, who were in all things to be subordinate to Iyeyasu, the fifth, but were also to serve in a measure as a guard and counter-balance, so that he should not abuse his power. Besides these, he had already appointed five governors (Bugiô). Upon the Go-Tairô (five great old men) devolved the care of the general well-being of the state, and the discussion of all important general questions, while the Go-Bugiô (five governors) were at the head of the administration. A third body, consisting of three members and called Chiurô (mediatory elders) were, as the name implied, to play the part of mediators in dissensions between the first two. The Go-Bugiô, who afterwards figured beside Iyeyasu, and partly in opposition to him, were Asano Nagamasa, Ishida Mitsunari, Masuda Nagamori, Nagatsuka Masaïye, and Masuda Geni.

After Taikô-sama had regulated these matters so as apparently to give satisfaction, he commanded that the citadel of Ôzaka should be made stronger, and to this end had 17,000 houses pulled down, to obtain space for the great outer wall. His last thoughts were directed to the armies in Corea. While commanding Asano Nagamasa and Ishida Mitsunari to recall them, he died with the cry: "Do not let my armies be destroyed in a foreign land." The governors made known the last will of their lord, and then went from Kiôto and Ôzaka to Fushimi to do homage to the new one, Hideyori, whereupon he, in accordance with the instructions of his father, repaired to Ôzaka with his relative, Maêda Toshiïye and the private governor, Katagiri Katsumoto. The officers of the returning army were cordially received by Iyeyasu in Fushimi, and rich presents were given to them.

The death of Taikô-sama filled the Christians with new hopes. These were founded partly on the returning army, and the influential Christian element in it, which declared itself for the young Hideyori,—partly upon the fact that another pretender to the supreme power, Hidenobu, a grandson of Nobunaga, had some time before gone over to Christianity. The Jesuits especially seem to have placed great hopes in him, though he was without any partisans. The fathers again came forward, strove to obtain the favour of those in power, and met with friendly hearing and encouragement everywhere, even from Iyeyasu. Under these circumstances the number of Christians increased apace.

The governors, as well as most of the Daimiôs of the south, including Môri of Chôshiu and Shimadzu of Satsuma, the two most powerful of these, mistrusted Iyeyasu. The Mikawa-chief, whose descent from Minamoto they doubted, had already become too strong and influential for them. To co-operate towards a further increase of his power, appeared a humiliation to men who attached great importance to their origin, and above all to be contrary to

their interests. Thus two powerful parties were formed in the country, who first secretly, then openly, confronted each other as enemies; the party of Iyeyasu, which willingly and trustfully crowded round this eminent personage, and the party of Hideyori, in the foreground of which was Ishida Mitsunari. As in the Gen-Pei-Kassen, so here, in general, though with some exceptions, the north was under the guidance of Iyeyasu, in opposition to the south under the governors. On the one side was unity; on the other, only a loose tie, which had to unite the most varied interests. There were first of all the vassals of Hideyori, who were bound to him by their position and their oath made to Hideyoshi; such were the Christian generals. With these were associated, not from attachment to Hideyori, but from purely personal interests, many princes of the south, as already mentioned, and finally a number of undecided Daimiôs, who were only awaiting the course of events, and would go over to Iyeyasu upon the first operation in his favour. Most of the barons of the country were gathered in the towns of Fushimi and Ôzaka with large retinues, so that the number of armed men who, besides the inhabitants, filled the houses and streets, was estimated at 200,000. In order to lessen materially the danger to the public peace, it had been determined to treat as the enemy of his country whoever began a contest, so that every one must be on his guard to keep his sword in its sheath. The Christian element was divided. While Konishi and a few of his friends were on the side of the governors, Ômura, Arima and several others declared for Iyeyasu. A dispute between the governors Ishida (Jibu-no-shôyu) and Asano, directly after the return of the troops from Corea, was the beginning of the disturbance. The contest assumed considerable dimensions, and Konishi, who had received the domain of Higo, and most of the Daimiôs, sided with Ishida Mitsunari. Iyeyasu, appealed to as umpire, likewise decided in favour of Mitsunari. In spite of this, Asano Nagamasa and his partisans attached themselves more closely to Iyeyasu. Soon after the governors, especially Mitsunari, became jealous of the growing influence of Iyeyasu, in presence of which their offices were empty titles. Mitsunari now intrigued against the Daifu-sama (Daifu- or Naidaijin, a dignity conferred by the Mikado) Iyeyasu, whom he sought to set aside. Amongst his accomplices was one Maëda Toshinaga, son of the Tairô Maëda Toshiiye, prince of Kaga. Toshinaga disclosed their plans to his friend Hosokawa Tadaoki, who, with tears in his eyes, begged him to desist from his dangerous course, and went with him to the old Toshiiye, to discuss the matter further. He, although no friend of the Daifu-sama, immediately had himself carried in his litter from Ôzaka to Iyeyasu at Fushimi, communicated to him the intrigues of the governors, in particular those of Mitsunari, and begged him to be on his guard, and after his death to grant his protection to his son Toshinaga. Iyeyasu promised this. Some time after, the Daifu-sama, by the advice of

Hosokawa Tadaoki, returned the visit, going to the old Daimiô of Kaga at Ôzaka. When the old man interceded on behalf of Hideyori, he answered that he would do all in his power to advance that prince's interests.

Mitsunari thought that the plans of himself and his allies would have little prospect of success without the co-operation of Hosokawa Tadaoki. He therefore sought to gain him over for the purposes of his party by great promises. Tadaoki, however, withstood the temptation, and communicated the conversation to Iyeyasu, begging him to be on his guard. Soon after, in common with Katô Kiyomasa, Kuroda Nagamasa, and Fukushima Masanori, he proposed to Iyeyasu that Mitsunari should be put to death as a conspirator; the Daifu-sama refused however to comply with their request. It was at the time when Ashô or Dainagon¹ Toshiiye, Daimiô of Kaga, lay on his death-bed in Ôzaka, that Katô and his party visited him and tried to induce him to bring about the condemnation of Mitsunari, whom Toshiiye had also seen. This he however declined to do. Hereupon they resolved to lie in wait for their antagonist and to slay him. Mitsunari, who was informed of this, applied to Môri, Ukida, Uyesugi, Satake and Shimadzu, the heads of five powerful houses with which his own had long lived in friendship, and asked them for their assistance. When Satake Yoshinobu perceived the perilous position in which Mitsunari had placed himself, he recommended him to go to Iyeyasu and entreat his protection. Iyeyasu received him in a very friendly manner, and tried to show him how unfounded was his suspicion and how reprehensible his treatment of himself. But when Katô and the other enemies of Mitsunari again desired his death, Iyeyasu urged the Bugiô to resign his office and retire to his province of Ômi. As a proof that he had no design against Mitsunari, he even sent one of his sons with him. Then he summoned Mitsunari's enemies and prevailed upon them to renounce their plot against him. Don Austin (Konishi Yukinaga), an old friend of Ishida Mitsunari's was willing to go into exile with him at the castle of Sawoyama (Hikone) in Ômi, but Mitsunari would not allow this, and persuaded him to remain in Fushimi.

Notwithstanding the personally conciliatory behaviour of Iyeyasu, Mitsunari continued his intrigues against him. In the "History of the Church" his conduct, so difficult for us to understand, is explained and excused on the ground that as a Christian he had acted in accordance with his oath made to Hideyoshi to prevent Hideyori's being deprived of his inheritance by Iyeyasu. He effected the contrary, for he soon caused the ruin of the young prince, as well as that of himself and all his friends. Uyesugi Kagekatsu, the lord of Echigo and Aidzu, and next to Iyeyasu the richest and most powerful prince of the north, came to him and agreed upon a plan to

¹ Dainagon, a high title conferred by the Mikado.

seize the Daifu-sama in the following year, 1600. They confirmed the compact by their oaths and sealed it with their blood.¹ Uyesugi then retired to his castles in Aidzu. Môri, Ukida, Maëda and Satake also retired to their territories. This was looked upon as a continuation of the hostile preparations against Iyeyasu, and he was advised to anticipate his antagonists, and to take possession of the western part of the castle of Ôzaka. This was done in the middle of the winter.² In the new year of 1600 most of the Daimiôs offered their good wishes to the Daifu-sama in Ôzaka, which implied that they recognised him as the successor of Hideyoshi, and their leader.

Soon after Kagekatsu was also summoned to the court at Ôzaka. He pleaded indisposition, and that he had received permission from Taikô-sama to live for three years in his territories, and did not come. Iyeyasu was angry at this opposition, gave up the western part of the fortress of Ôzaka as well as the castle at Fushimi to the protection of two vassals, and repaired with a large train to Yedo, in order to prepare for the coming conflicts.

The governors Mitsunari and Yoshitaka now sent a circular to all the Daimiôs, in which they brought thirteen different accusations against Iyeyasu, culminating in this, that he was usurping the inheritance of Taikô-sama, although he had promised him to help to secure it to Hideyori. They swore to be faithful to one another, and appointed Môri Terumoto leader of the league. With an army of some 150,000 combatants, who were quickly brought together, they took the western part of the fortress of Ôshima, left Môri Terumoto and Masuda Nagamori here with a corps for reconnoitring purposes as well as for the protection of Hideyori, and advanced with the main army northwards to Fushimi, where, after a siege of ten days, the stately castle fell into their hands; it had, however, taken fire. Its defender, Torii Mototada, destroyed his own life in consequence. From Fushimi the army of the league advanced into Ômi to occupy Mino and Owari.

Iyeyasu had betaken himself from Yedo to Koyama in Shimotsuke, when the news of the siege of Fushimi reached him. He now held counsel with his sons and vassals as to the steps he must take. Ii Yoshimasa declared this to be a favourable opportunity, which he must not allow to pass, of taking the government of the country into his hands. Iyeyasu, he said, should collect the scattered troops, and march at the head of them to encounter the enemy. Iyeyasu determined to act upon this advice. As, however, the families of many of his adherents had been taken prisoners at the capture of the fortresses of Ôzaka and Fushimi,

¹ This old practice of confirming an oath or a testimony in court, consisted in the placing under the documents of a drop of blood from the middle finger of the right hand and pressing it with the thumb nail. We still find it in 1877 on the occasion of the trial of Governor Ôyama (see *Rising of Satsuma*).

² Hideyori retained the central part of the fortress.

he left every one free to join the league in order to save his wife and children, and even promised to furnish those who wished to do this with the necessary supplies for travelling. Then Fukushima Masanori stood forth and exclaimed : "There is none amongst us who, under circumstances such as the present, would desert his feudal lord for the sake of his family!" All assented to this decided declaration. The plan of operations was now drawn up. To Masanori was vouchsafed the honour of leading the vanguard ; to Yuki Hideyasu, the eldest son of Iyeyasu, was entrusted the care of the capital and the Kuwantô ; the army was divided into two parts, one of which Iyeyasu himself was to lead by the Tôkaidô, whilst his second son, Hidetada, was to follow the Nakasendô route with the other.

Mitsunari had reached the fortified town of Ogaki in Mino, had hastily put it into a state of defence, and had drawn many of the lesser barons of Ise and Owari to his side. The army of the league under his command was estimated at 180,000 men. He had further succeeded by promises in gaining over for the league Ota Hidenobu, the grandson of Nobunaga, a prodigal and voluptuary, and had entrusted to him the defence of the castle of Gifu, a very important point, inasmuch as it served for the defence of an outpost on the Nakasendô as well as that of the Tôkaidô.

The barons along the Tôkaidô joined Iyeyasu, who soon reached Owari unhindered, and encamped at Kiyosu, 7 ri from Ogaki. His army (75,000 men) was much weaker in numbers, but it obeyed with full confidence one will, and thus had greatly the advantage of the army of the league, as was soon seen.

Ukida Hideiye, the commander-in-chief at Ogaki, had gained great honours in Corea under Konishi, and was an able leader, whose skill Iyeyasu fully recognised. Instead of obeying him and remaining in Ogaki, most of the allies assented to the proposal of Ishida Mitsunari, who had but little military experience, and confiding in the superiority of their numbers, left the fortress to meet Iyeyasu in open battle-field. By the taking of Gifu the latter had successfully assumed the offensive, without waiting for the army of his son, which was detained in Shinano. The army of the league retreated towards Sekigahara, and 130,000 men strong, here took up a favourable position at the side of the Nakasendô and flanked by the southern spurs of Ibukyama, three miles distant, while Iyeyasu approached from Gifu with 75,000 men. In October, 1600, the decisive battle took place. Both sides fought bravely the whole day, the furious struggle long remaining undecided, but perseverance, unity of command, and caution, finally gave Iyeyasu the victory. His son came too late, and could only take part in the pursuit of the enemy towards Kiôto and Ôzaka.

A very short distance from Sekigahara an avenue of pine-

trees leads from the Nakasendô to an old mound at the foot of Aikawe-tôge. A stone pavement above this and the moss-covered fence indicate the spot whence Iyeyasu issued his commands during the battle. But on the side of the village which looks toward Kiôto, a mound with its crowning monument reminds us that here is a Kubi-dzuka, *i.e.* a heap of heads. The spot is not far distant from a temple dedicated to the war god Hachiman. There are indeed many such hillocks around, where the heads of the slain enemies were buried, for in the battle of Sekigahara about 10,000 of the defeated army are said to have lost their lives. Of their leaders, Ishida Mitsunari, Konishi Yukinaga and Otani Yukei were captured, because they, as Christians, had scorned to follow the custom of the country and take their own lives. Therefore they suffered what, in the opinion of the Japanese, was a shameful death; they were beheaded in Kiôto, and their heads publicly exposed on stakes in the bed of the Kamo-gawa. With respect to the intriguing Mitsunari, this was comprehensible, but as regards Konishi, whose son had married a grand-daughter of Iyeyasu, and for whose talent and character the Daifu-sama had always manifested the greatest respect—probably his friendship for Mitsunari and the influence of his mortal enemy Katô prepared the same end. Certainly he now fell on account of his religion. Towards most of his other opponents Iyeyasu showed himself mild and forgiving.

At Kusatsu, Hidetada and his corps reached the main army, and advanced with it to Ôtsu on the Biwa Lake. Here he again separated from it and turned towards Kiôto, while Iyeyasu marched directly southwards to Fushimi and Ôzaka. The Mikado sent him his good wishes at Ôtsu, and most of the barons also hastened to congratulate Iyeyasu on his great success or to tender their submission. Amongst the latter were Môri Terumoto and Masuda Nagamori. These did not immediately receive any answer. However, after Iyeyasu had entered Ôzaka, their submission was accepted. At that time the powerful house of Môri still possessed eight provinces. It lost six of these, and was henceforth obliged to content itself with two, Chôshiu and Suwô.¹ Masuda Nagamori fared still worse. He was deprived of his domain and sent to the monks at Kôya-san. The possessions of Ukida Hideiye and many other opponents were also confiscated.

The castle of Ôzaka Iyeyasu at first left in the undisturbed possession of Hideyori and his mother, who continued to hold their little court here.

The generals, Katô Kiyomasa and Kuroda Yoshitaka now

¹ Môri Terumoto had remained behind in Ôzaka with a reconnoitring corps of 40,000 men. After the battle of Sekigahara and the death of Konishi, he had thought to gain the favour of the victor by sending him the head of Konishi's son, who commanded under him, but in this he was disappointed, for Iyeyasu was no friend of such base conduct.

received orders to pacify the west and south, a problem which was not difficult to solve, for scarcely a Daimiô offered any serious resistance. In Kiushiu, Yoskitaka subdued the provinces of Bungo, Buzen and Chikuzen, while Kiyomasa reduced Hizen to quietness. Tachibana Muneshige, prince of Chikugo, was not inclined to submit without a struggle, so that Nabeshima Nawoshige of Saga came to Katô's help. By the advice of Kuroda, the leader of Tachibana's army was invited to a conference, at which an agreement was brought about. The generals of Iyeyasu, reinforced by the whole of the north of Kiushiu, now marched southwards toward Satsuma, which likewise submitted.

In the north of Japan, Uyesugi Kagekatsu and Satake Yoshinobu had been the chief instruments in the formation of the league against Iyeyasu, but had contributed nothing to strengthen it materially. When the news of the issue of the battle of Sekigahara reached them, they hastened to declare their submission to Hideyasu. They were sent by him to his father, Iyeyasu, at Fushimi, where they gave themselves up unconditionally, and had to submit to the loss of the greater part of their former possessions. Even Satsuma and Chôshiu, the most powerful clans of the country, had not been able to withstand the strong current, but were obliged, hard as it might be for them, to bend beneath the yoke of the Mikawa chief and his successors.

Great changes took place in the possession of property, by which all adherents of Iyeyasu were handsomely rewarded. After this had been brought about, and arms had everywhere been laid down, Iyeyasu sent his son Hidetada to the Mikado at Kiôto, in order to lay before him a minute report of all the events and changes which had recently taken place in the empire, and to obtain his sanction, of which he might be certain beforehand. Hidetada was then sent back to Yedo, while Iyeyasu remained in Fushimi, where he caused the castle to be rebuilt, and where he also gave audience to Shimadzu Tadatsune, the son of Yoshihiro of Satsuma. Ukida Hideiye, who had taken refuge with him, was banished to the island of Hachijô. But Iyeyasu showed himself very gracious to the house of Shimadzu, and left them in undiminished possession of Satsuma, Ôsumi, and the southern part of Hiuga.

In the year 1603, Iyeyasu was honoured by the Mikado with the title of Udaïjin, as well as appointed head of the Minamoto, and Sei-i-tai-Shôgun, and soon afterwards he received the homage of the barons in his residence at Yedo. Henceforward he stood at the summit of power, which was no longer disputed with him in any part of the land, and to which his way had been paved by personal ability and favourable circumstances.

SIXTH PERIOD.

THE SHÔGUNATE OF THE TOKUGAWA, OR THE TIME FROM THE BATTLE OF SEKIGAHARA UNTIL THE RESTORATION OF THE MIKADO'S RULE (1600-1868 A.D.).

(a.) *Iyeyasu, Hidetada and Iyemidzu.—Eradication of Christianity.*

WITH the battle of Sekigahara, the bloodiest and most momentous conflict known to Japanese history begins an entirely new epoch. This is the Shôgunate of the Tokugawa, who remain for upwards of 250 years in undisputed possession of the supreme power, and secure for the country a surprisingly long period of peace after centuries of civil wars. The beginning of this epoch is also the time when the feudal system receives its most complete development, when Christianity is eradicated by all the means of force and cunning, and when intercourse with foreigners is confined to the Chinese and the Dutch at Nagasaki.

After violent conflicts, Iyeyasu had succeeded in obtaining the supreme power, the Shôgunate, for his house. His whole efforts were now directed to strengthen it and retain it in his family. For this end peace within and without seemed to him to be essential. Among the measures which he and his immediate successors adopted to insure it were the eradication of Christianity and the most detailed regulation of the relations in which the various classes of Japanese society were henceforward to live. Before, however, we discuss these things with the greater fulness which their great importance demands, we may just mention various other occurrences of subordinate import belonging to the era of the first three Shôguns of the house of Tokugawa.

The sudden recall of the Japanese army on the death of Hideyoshi had hindered a settlement of relations with China and Corea. The army of the Ming still lingered in the Corean peninsula as a heavy charge upon its inhabitants. When, therefore, Iyeyasu caused overtures of peace to be made through Sô Yoshitomo, the lord of Tsushima, to the king of Corea, they were gladly welcomed. A plenipotentiary was sent in company with Yoshitomo to Kiôto, and with him Iyeyasu, in 1605, agreed upon the peace which was to pave the way for friendly intercourse with his western neighbours, and enable many hundred Corean prisoners of war to return to their homes. Renewed relations with China were also brought about.

In this period moreover the arrival of the first Dutch and English took place with a view of establishing commercial relations with Japan. They were well received by Iyeyasu, were searchingly interrogated, amongst other things, of course, as to the character of

the Namban (Portuguese and Spaniards), their Christianity, and the Jesuits, and were thus doubtless of great influence in the determinations and measures which were soon adopted against the confessors of the Gospel.

In the year 1605, very soon, therefore, after the peace with Corea, Iyeyasu handed over the Shōgunate to his son Hidetada, and retired to the castle which he had built at Sumpu (Shidzuoka), in the province of Suruga, that he might here devote himself, together with some learned counsellors, more uninterruptedly to the elaboration of the laws¹ which are called after him. Yet he remained until his death, in 1616, the soul of the government so, that his son undertook little that was important without his knowledge and counsel. A year after his death his remains were deposited with great solemnities in the magnificent temple-grove at Nikkō, which he had chosen as his place of sepulture. The Mikado had elevated him to a place among the gods with the posthumous title of Shō-ichi-i Tōshō Dai-gongen, *i.e.* "Supreme Highness, Light of the East, Great Incarnation of Buddha."² Under the shortened title of Gongen-sama, Iyeyasu continued to live in the mouths of the people, who did not neglect on his festival to offer their devotions to the new god, as well as to the other deities, in the temples dedicated to him.

Tokugawa Iyeyasu was descended from Minamoto Yoshiie (Hachiman Tarō) and from the Nitta branch. The family name is said to be derived from a place and river in Shimotsuke, where his ancestors long dwelt. Tokugawa Shiro, the father of Iyeyasu, lived as a humble peasant in the village of Matsudaira, in the province of Mikawa.³ Here Iyeyasu was born in the year (1542) of the discovery of Japan by Pinto. Under Nobunaga he earned his first spurs and acquired his first possession of any importance in his native province, for which reason he was long called among his opponents the Mikawa-chieftain. After the Kuwantō became his, he had to resign Mikawa to Hideyoshi.

Iyeyasu is generally considered the most important figure in the history of Japan. He was an attractive personality, a man conspicuous by his knowledge of men, and otherwise of considerable intellectual powers, which he displayed not merely as a successful

¹ As his assistants and advisers in the preparation of these "Laws of Iyeyasu," are named; the Kuwambaku Nijō Akizane, further the scholars Fujiwara Susumu and Hayashi Nobukatsu, who were of great influence through their acquaintance with the writings of Confucius and other Chinese philosophers.

² In the long Chinese title, shō = highness, ichi = one, first, i = rank, tō = East, shō = light, dai = great, gongen = a Buddhist title for saint or Buddha.

³ After Iyeyasu had obtained the Shōgunate, the name of his birthplace, Matsudaira was made a title of honour, which he conferred upon many Daimiōs, who prefixed it to their other titles, *e.g.* Kuroda Matsudaira Mino no Kami, as Kuroda, the Daimiō of Chikuzen, called himself; or Nabeshima Matsudaira Hizen no Kami, the title of the prince of Saga.



Rein, Japan I.

Phototype by Strumper & Co., Hamburg.

TOMB OF IYEMIDZU AT NIKKO.

Hodder & Stoughton, Publishers, London.

commander, but also as regent and legislator. Especial praise is given him for his great love of truth, and it is maintained that he never broke his word, so that in this respect he enjoyed unbounded confidence. He is said also to have been naturally peaceable and gentle, and to have regretted every life that, by the force of circumstances, he was obliged to shorten. In this respect he stands far above all his predecessors. He granted an armistice, as we have seen, after the battle of Sekigahara, to all his foes, except a few, as soon as they asked for it, and even showed himself considerate in some cases where this did not happen, leaving it, when he had no anxiety as to his own position, to time to bring about a reconciliation between those who were discontented with the new state of things.

Hidetada, the son and successor of Iyeyasu, conducted the Shôgunate, from 1605 to 1623. The two most conspicuous acts in this period, the renewal of the edict of Taikô-sama against the Christians (1614) and the siege and capture of the castle of Ôzaka (1615), happened within the lifetime of his father, who was the originator of both. On the death of the latter, the Mikado advised him to continue zealous, industrious and devoted to his sovereign, and to banish from his soul the deceptive dreams of ambition. Hidetada seems to have followed this advice, and to have contented himself with carrying out his father's plans for a peaceful development of the country, as well as for the strengthening and adornment of the capital. In the latter respect it is noteworthy that the temple groves of Uyeno and Shiba, in the north and south of Yedo, which henceforward became the greatest sights of this town of the Tokugawa, essentially received their delimitation and beautification under Hidetada. Of the fourteen Shôguns of his family, only two, Iyeyasu and his active grandson Iyemidzu, were entombed in Nikkô. Of the others, six, including Hidetada, rest in Shiba, and six in Uyeno.

Iyemidzu, the third Shôgun, and son of Hidetada, who ruled from 1623-1651, possessed to a greater degree than any other member of the family, the energy and activity of his grandfather. He carried his system to completion, tightened again the reins of government, which had been relaxed in his father's hands, effected the entire eradication of Christianity and the seclusion of the country, and carried out as ordered to the minutest detail, the relation of dependence of all the classes of society upon himself as the first vassal of the Mikado and supreme ruler of the country. The town of Yedo received its still existing water supply, and the provision against fires, which has been copied everywhere. Iyemidzu further established a coinage, regulated measures and weights, and instituted a general survey and cartography of the country. He paid great respect to the Mikado, and five times visited him in pompous processions. The Bakufu (the administration of the Shôgun) flattered his great pride in a response to the

king of Corea, in which they bestowed upon him the title of Taikún, in order to produce a greater effect upon the Coreans.¹

It has already been mentioned that in the battle of Sekigahara several Christian princes with their vassals, and in particular the Daimiôs of Ômura and Arima, bravely supported Iyeyasu. This and various other circumstances may have brought it about that in the next few years he showed a good deal of friendliness to the Jesuits, and by no means hindered their missionary work, so that despite the persecutions to which the Church was exposed in some parts of the country, where a change of masters had taken place, as particularly in Higo and Amakusa, elsewhere during the first decade of the new century it grew in extent and in the number of its adherents. Their envoys preached the word of God northward to the border of the empire, and especially in Sendai and in the island of Sado obtained many new professors. The total number of the Japanese Christians about this time amounted probably to nearly 600,000, although other data make the number three times as large.

The persecutions, which were carried on in the most cruel fashions, began in Higo, the former lordship of Konishi. In the short time during which he had possessed that province after his return from Corea, his zeal had succeeded in eradicating the Buddhist worship and in banishing its unalterable adherents. After his death Katô Kiyomasa had this province bestowed upon him by Iyeyasu, while the governor of Nagasaki, called Terasawa, received the island of Amakusa. Scarcely were the two established in their possessions, than they gave free course to their old animosity against Christianity, recalled the bonzes, and now proceeded like their predecessors, though with much greater severity, against the Christians. Of Toronosqui (Katô) the Jesuits say: "He began like a fox and ended like a lion. The vineyard of the Lord he wasted like a wild boar that thirsteth for blood."² He had hardly finished his work, when he had to take poison in Fushimi at the bidding of Iyeyasu, because he was charged with opposition and intrigues against him. Hosokawâ, another adherent of Iyeyasu, now received the lordship of Higo.

In Arima also the Christians soon had a good deal to suffer. Don Michael, the son of Protase, had put away his Christian wife, in order to marry the daughter of the Shôgun Hidetada, and had become an apostate. As such, he accused his own father at the court of intrigues against it, and brought about his death, in order

¹ Probably for the same reason the word was used a good deal in intercourse with foreigners after the Perry expedition, and for a long time employed by them for the Shôgun. It means "great army," and is a title which no Mikado has ever bestowed upon any of his subjects.

² The Japanese judgment of Katô Kiyomasa on the other hand is very favourable. He is said to have been valiant, honest and straightforward, as well as a man of great learning. There is a remarkable bronze statue of him on horseback in the South Kensington Museum.

to secure the lordship of the country for himself. Then he removed his seat from Arima to Shimabara, and set about the restoration of heathenism by every conceivable means. Most of his subjects remained true to their faith, and endured all manner of privations, persecution and torture, with the utmost constancy. That the common people living in servile subjection should not willingly submit themselves in all things to their master, was a new phenomenon arising out of these Christian persecutions, and one which caused much anxiety at the court. Thousands were banished to the mines of the island of Sado. Their personal goodness and their fidelity to their faith led the governor of the island, called Ôkubo Nagayasu, to the adoption of Christianity.¹ Griffis mentions that he shortly afterwards became the head of a Christian conspiracy, which had as its object to make the island of Sado independent and to make Ôkubo its ruler. The signatures of the conspirators, sealed with their blood, were found attached to a document, together with other certain evidences of the design. Whether this story was well founded, or whether the whole affair was not a malicious invention of the enemies of Christianity, and in particular of the apostates, who were then busily laying informations everywhere, I could not ascertain. In the year 1606 Iyeyasu had renewed Taikō-sama's edict against Christianity, but for years was content with an external conformity to it, until a multitude of influences combined to induce him to take severer measures. These influences came partly from the foes of Christianity in general, partly from the Dutch and English, and finally from the imprudence and provoking demeanour of the Christian missionaries themselves. After the year 1608, when the Pope had permitted other religious orders as well as the Jesuits to undertake missionary work in Japan, Spanish monks had come from Manila and excited the indignation of Iyeyasu, by disregarding his prohibition against the preaching of Christianity, and by stirring up, as was charged, the Christian population to disobedience. Even the members of the Society of Jesus, when the news of the canonization of their founder Loyola reached Japan, forgot their usual prudence and caution, and celebrated in Nagasaki with great magnificence a public procession, in which forty fathers of the order took part, followed by an illumination.

On the 27th January, 1614, appeared that fatal proclamation which led to a general persecution of the Christians throughout the country. In it Iyeyasu declared the foreign *Bateren* (Patres) and *Iruman* (Portuguese irmãos or Fratres) to be enemies of the country, of the gods (Kami) and of Buddha, and commanded their

¹ The island of Sado with its rich gold and silver mines had formerly belonged to the house of Môri and afterwards to the Uyesugi. After the battle of Sekigahara it was taken from the latter, made a domain of the Shôgun, and entrusted to Ôkubo to administer, under whom its yield considerably increased.

extermination, the destruction of the Christian churches and the return of their converts to the heathen faith. Strict measures of suppression were laid down in fifteen articles which the authorities were ordered to enforce against the Christians. In the last of them the Kirishitan (Christians) are once more held up as enemies of the empire and of the public peace—after the same sentiment has been repeatedly expressed in the edict—in the following terms, “The band of Kirishitan has come to Japan, not only that their trading ships may barter goods, but also with the desire to propagate an evil law, to overturn true doctrines, in order that they may thus effect a change in the government of the country, and may be able to usurp possession of it. This is the seed of much unhappiness and must therefore be destroyed.”

This persecution began by the seizing of the foreign priests, as well as of the native members of the Society of Jesus, in Kiôto, Fushimi, Ôzaka and other places, who were sent to Nagasaki, and from thence conducted in vessels to Macao. There were about 300 persons in all, namely, 22 Franciscans, Dominicans and Augustines, 117 foreign Jesuits, and nearly 200 native priests and catechists. About the same time Justo Ukondono (Takayama), the former Daimiô of Akashi, who had been already banished by Taikô-sama to Kanazawa in Kaga, was sent, together with some other Christians, in a Chinese junk to Manila, where he soon afterwards died.

The siege and capture of the castle at Ôzaka by Iyeyasu and his son Hideyori took place in connection with this persecution in 1615. Hideyori, the son of Taikô-sama, who was now twenty-three years old, as already mentioned, had been left there, with his mother and rich hereditary revenues, by Iyeyasu, after the battle of Sekigahara. The Jesuit fathers had paid repeated visits to him, and had brought him presents, and moreover the castle had become a place of refuge for many of the persecuted and discontented, Christians as well as heathens. This circumstance, and the fear that serious dangers might yet arise from thence to the house of Tokugawa or to the country, finally determined Iyeyasu to undertake this expedition, for which the troops of the Kuwantô and from Kiushiu were offered him. The strong fortress was admirably defended. The battle which was fought on the 9th of June, 1615, to determine its future master, was extraordinarily bloody, even though the report that nearly 100,000 men lost their lives in it may be somewhat exaggerated. Victory seemed on the point of declaring itself for the besieged, when a part of the castle burst into flames, to which thousands became a sacrifice, so that the conflict ended in a complete defeat of the defenders. No trace whatever could be found of Hideyori and his mother, and it was accordingly assumed that they had taken their own lives and then been consumed by the flames.

As many of the exiled priests and monks secretly returned again,

while others had never left the country at all, in 1617 Hidetada proclaimed the punishment of death against every foreign priest who should still be found in the country. The accounts of the Jesuits are full of details as to the exquisite tortures to which the Christians were now exposed, and the heroism with which in most cases they endured them. Other narratives of that period, to which no party colouring can be attributed, only confirm what they report. Thus Captain Cocks, who in 1619 visited Japan in the service of the East India Company, relates as follows :—

“The persecution in this country, which before proceeded no further than banishment and loss of civil and religious liberties, has since run up to all the severities of corporal punishment. The Christians suffered as many sorts of deaths and torments as those in the primitive persecutions ; and such was their constancy, that their adversaries were sooner weary of inflicting punishments than they of enduring the effects of their rage. Very few, if any at all, renounced their profession ; the most hideous forms in which death appeared (by the contrivance of their adversaries) would not scare them, nor all the terrors of a solemn execution overpower that strength of mind with which they seemed to go through their sufferings. They made their very children martyrs with them, and carried them in their arms to the stake, choosing rather to resign them to the flames than leave them to the bonzes to be educated in the pagan religion. All the churches which the last storm left standing, this had entirely blown down and demolished, and heathen pagods were erected upon their ruins.”

In the same year (1617) Hidetada restricted foreign commerce to Hirado and Nagasaki, and in 1621 forbade the Japanese to leave the country. Finally, in 1624, all foreigners, with the exception of the Dutch and Chinese, were banished from the country by Iyemidzu, and a further edict was promulgated, which ordered the destruction of all ships of any size, and limited the building of ships to craft of certain modest dimensions, in order to prevent the Japanese henceforward from navigating the open sea and thus coming into contact with foreign nations. Fresh persecutions of native Christians, even more terrible than the earlier ones, ensued. Thousands fled to China, Formosa and the Philippines, while thousands more died upon the cross, were beheaded, drowned or burnt alive. Every kind of torture was applied which barbarism and hatred could invent. Our hearts burn within us and we are filled with admiration, when we read the various accounts of the joyfulness and constancy with which the unhappy victims of their faith met death. Griffis justly closes his account of this phenomena with these words :—

“If any one doubt the sincerity and fervour of the Christian converts of to-day, or the ability of the Japanese to accept a higher form of faith, or their willingness to suffer for what they believe, they have but to read the accounts preserved in English,

Dutch, French, Latin and Japanese, of various witnesses to the fortitude of the Japanese Christians of the seventeenth century. The annals of the primitive Church furnish no instances of sacrifice or heroic constancy, in the Coliseum or the Roman arenas, that were not paralleled on the dry river-beds and execution-grounds of Japan."

"The description of the torments to which the Christians were subjected, reads like a chapter out of Dante's *Inferno*," said Gubbins, in a very interesting lecture, which he delivered a few years ago at Tôkio. While some were martyred in every possible way, the others were compelled to look on. The persecutors were not content with the ordinary modes, of hanging, crucifying, drowning, beheading, but flung the victims down from high precipices, buried them alive, had them torn asunder by oxen, tied them up in rice-sacks of plaited straw, which were then heaped up and set on fire, or put them in cages with provisions before their eyes, where they were allowed to perish of hunger.

After these horrors had continued for twenty years together, though with unequal violence, without any serious resistance on the part of the Christians, they were at length put to an end for some time by a rising of the still remaining Christians, and a wholesale slaughter of them which followed, and in which over 30,000 were sacrificed. This event is known in history as the Rising, or sometimes as the Massacre, of Shimabara, and is described, not only in the "*History of the Church*" and in the writings of the Dutch, but also in Japanese works, such as the *Shimabara Kassenki* (Account of the War of Shimabara) and others. The first beginnings of this revolt dated indeed many years back, to the time when the new and apostate Daimiô began to oppress his Christian subjects in every way. But it was only about the year 1636 that the old abandoned castle of Arima and the neighbouring islands became the place of refuge and rendezvous of some 30,000 or 40,000 Christians, who came not only from the dominion of Shimabara (Arima), but also from other parts of the island of Kiushiu, and here put themselves into a position of defence against their persecutors. Their principal leader appears to have been a man known by the name of Nirado Shirô, from the island of Amakusa. In 1677, Itakura Shigemasa was commissioned by the Shôgun to march against the rebels, at the head of an army which he had chiefly collected in the island of Kiushiu, and to annihilate "the peasants." This was however by no means such an easy task as had been supposed. Only after a three months investment by water and by land, in which Itakura and his son fell, and Dutch cannon, it is said, co-operated, did the army succeed in becoming master of the fortified place Arima. The massacre which ensued baffles description. All the besieged were doomed to death. Thousands of them were led to "Papenberg," an island at the entrance to the harbour of Nagasaki, and hurled from the

steep cliff into the sea ; three thousand men were slain and buried at Tomioka in the island of Amakusa, as witnessed by inscriptions upon monuments there ; but the great majority found their graves in Arima itself.

Among the numerous means which were adopted for the discovery of Christians, as their number became smaller, was the E-fumi, or trampling on the image of Christ. At first it was an ink-drawing, that was laid upon the ground, and which people were challenged to show their contempt of by trampling upon it, until, in 1669, a brass-founder in Nagasaki prepared a relieve in copper, which was then much used, and was passed on from one Daimiô to another. Special officers, Kirishitan Bugiô, as they were called, were appointed to superintend the detection and extermination of the Christians ; they had to take an oath that they would perform their duties impartially and with devotion to the Shôgun. Rewards were also offered for the discovery and giving up of foreign priests or native Christians, which were afterwards considerably increased. The Christians were spoken of as Jashû or Jashûmon, the corrupt or evil sect, and every one, whether child or adult, was taught to shun Christianity as evil incarnate. Proclamations against the Jashûmon were posted up in the centre of towns and villages, at the cross roads, along the country roads, and in the mountain-passes. They were still to be read in many places until the collapse of the Tokugawa rule in 1868, but have now long disappeared.

That under such circumstances the light of the Gospel was not wholly extinguished, but in places continued to glimmer for centuries, and indeed that at a short distance to the north of Nagasaki a large congregation (Urakami) were able to maintain their Christian faith, and to hand it down through many generations, even to our own days, must strike us with surprise, just as the Japanese authorities were not a little astonished by the discovery of this fact in the year 1868.

Having already found occasion in a previous chapter to point out the circumstances which were so favourable to the propagation of Christianity in Japan, we may now on the other hand enquire, in concluding our account of its persecution and eradication, what were the reasons which could lead a people, who had otherwise always exhibited great religious toleration, to so malignant and cruel a persecution of the Christians. And it must be admitted to begin with, that the intolerance which the Jesuits had taught, must bear a great portion of the responsibility, and thus bitterly avenged itself upon them and their own work. Nor are we led to this judgment by the reports of their Dutch contemporaries, or of the Japanese, but we base it upon the reports of the missionaries themselves. They lived in the age and in the spirit of the Inquisition, when many things were done "to the greater honour of God," that were quite inconsistent with Christian teaching. The intolerance of the Christian princes towards their heathen

subjects, their extermination and the destruction of their temples, are acts which the Jesuits extolled as signs of religious zeal, but which were calculated to make Christianity many mortal enemies, particularly among the heathen priests. Moreover, the mutual hostility of the Christian orders, especially after the date of the arrival in Japan of some Spanish monks from Manila, could not but prejudice the Christian cause. And again, the unchristian life and evil example of the foreign traders and seamen at Nagasaki, Hirado and elsewhere, could not contribute to increase respect for Christianity itself. Those ports were the rendezvous of the most abandoned European adventurers, who delighted in vice of all kinds, bought as slaves the poor and helpless and especially children, and exported them to Macao or Manila, and thus excited the disgust of all the better minded among the Japanese. Human flesh was at that time cheap. Bishop Cerquera vainly exerted himself towards the end of the 16th century to prevent this disgraceful traffic, of which he says, that it had brought so many Japanese and Coreans into the market, that even Negroes and Malays in the service of Portuguese traders could themselves be owners of slaves.

We find running through all the proclamations against Christianity the idea that it relaxes piety towards parents and ancestors, as well as obedience to the authorities ; an assertion which even in modern times has frequently been maintained ; as notably in the very remarkable treatise entitled *Bemmô*, or an Account of Error, by Yasui Chinhei.

In the earliest Dutch books about Japan, the chief cause assigned for the persecution of the Christians and the expulsion of foreigners, is the treachery of the Jesuits, who had endeavoured to turn Japan into a Portuguese or Papal province. Thus *e.g.* Johann Hugo von Linschoten wrote of the Jesuits in Japan, that they were notoriously exerting themselves to reduce everything under their power (*Denkwürdige Gesandtschaften*, p. 213).

No support for this accusation is to be found indeed in the writings of the Jesuits, but there can be no doubt that the fear lest the native Christians should, through foreign influence, become traitors to their country, was the chief cause of their persecution. The foes of the Jesuits and their adherents were never weary of pointing out again and again that they were a danger to the state. In this respect the English and Dutch also, as well as the heathens, essentially influenced the decision of Iyeyasu and his successors, since it was for their commercial interests to drive out the Portuguese, and they put no restraint on their hatred of the Catholic Portuguese and Spaniards. We must remember that the Fall of the Netherlands and the Defeat of the Armada were still fresh in the recollection of the Protestant Dutch and English, who in the days of Iyeyasu came to Japan, and to these zealots the Catholic appeared more dangerous than the heathen.

If Iyeyasu through these various influences was convinced of

the political danger of the foreign missionaries and their doctrine, and if he had taken measures accordingly—though in 1606 he had received with all honour and dismissed with rich gifts the Portuguese Bishop Cerquera,—this was still more the case with his grandson Iyemidzu. An expression which is attributed to him is too characteristic not to be allowed a place at the end of this account: “If my dynasty perishes in consequence of civil wars, this is a disgrace which falls only upon me; but if only an inch of our country were to fall into foreign hands, the whole nation would have cause to be ashamed.”

The cessation of commercial intercourse with Japan was seriously felt by the Portuguese in Macao, as well as at home. Several attempts were made to renew it, though with a very unfavourable result. Thus in 1640 there landed four ambassadors of the governor of Macao, who with the greatest portion of the crew were taken prisoners and beheaded at Nagasaki. The few whose lives were spared were sent back to Macao, that they might report the fate of their comrades as a terrible example. Soon afterwards, when Portugal had regained its independence, and King John IV. was on the throne, another attempt was made from Lisbon. Two well-equipped ships of war provided with rich presents were sent out under Gonzales de Sequeira, and cast anchor near Iwô-shima in the south of Satsuma. After forty-three days spent in fruitless efforts to establish renewed intercourse with the government, they had to sail away again and to abandon the field for ever to the Dutch, who had already entered upon the Portuguese inheritance in the rest of Eastern Asia, and who just at this time, when Abel Tasman and Martin Gerritszoon Vries were directing their ships through the Pacific, stood at the height of their spirit of enterprise.

Except in historical matters, the intercourse of the Portuguese with Japan for nearly a hundred years, notwithstanding the great facilities under which it took place, very moderately contributed to the extension of our knowledge of that distant island-world. It was reserved for their successors, the Dutch, and in particular for the foreign surgeons in their service, to make Europe acquainted with the peculiar natural history of Japan, and to adorn our hothouses, gardens, and public grounds, with an abundance of the loveliest Japanese plants. It was only through the Dutch that Europe derived its knowledge of the language and ethnography of the country, although there had been not a few Jesuit fathers who were perfect masters of the Japanese idiom.

As in Pinto's time firearms met with special approval, so in the beginning of the seventeenth century the Portuguese delighted the Japanese with tobacco. Smoking, despite the prohibitions which Ieyasu launched against it, was soon eagerly practised by all conditions and by both sexes, and has since then lost none of its popularity, so that we may say that “*Tabako*” is the favourite

and commonest word with which the Namban (Portuguese) have enriched the Japanese language. Of other words and ideas which have thus been introduced into Japanese, besides those bearing reference to Christianity, the following are the principal: pan (pão), bread; kasutera (pronounced kastéra, from Castilla), a saffron-cake; tanto, much; kappa (capa), a waterproof; koppu (copa), a cup or wine glass: birôdo (velludo), velvet; biidoro (vidro), glass.

B. The laws of Iyeyasu, the Feudal System and the State of Society during the Shôgunate of the Tokugawas; Mikado and Kuge, Daimiôs and Samurai, Fealty and the Harakiri. Heimin and Eta.

As already indicated, the efforts of Iyeyasu and his immediate successors were directed, from the time of the battle of Sekigahara, towards retaining in their family the government of Japan, now in their hands, and towards securing peace for the country. The extirpation of Christianity, and the closing of the country, were intended to serve this end. But above all, a clearly developed system of relations between the different classes was worked out by the laws of Iyeyasu, in which fear was the chief motive for obedience, and espionage and severity of punishment were the instruments and maintainers of fear. The new Shôgunate derived its strength from the personal ability of its founder, and from the tie by which he bound his vassals and favourites, to whom, after the downfall of his enemies, he gave rich fiefs, though subject to such limitations on the one hand, and such privileges on the other, that the consciousness of their dependence on his house could never be lost sight of. By this peculiar amalgamation of the interests of the house of Tokugawa with those of its vassals, Iyeyasu created for himself a power strong enough to oppose the Mikado as well as the old princely houses. He and his grandson Iyemidzu forged the iron while it was warm and malleable. The humiliating fetters with which he bound proud old races, such as the houses of Satsuma, Chôshiu, and many others, had to be quietly borne, because the individual was powerless against the collective force, and the surrounding of his territory by the possessions of other Daimiôs, who were dependent on the Tokugawa, as well as the perfect system of espionage, left no room for an understanding and co-operation with other discontented princes.

When the proud and powerful house of Shimadzu of Satsuma had bent before Iyeyasu, he found it to his interest not only to leave them their former territories, but to help to increase them, by giving Shimadzu Yoshihisa a commission to subjugate the principality of the Loo-choo Islands, and when this had been accomplished, by allotting it to Satsuma. The Daimiô of Satsuma was also appointed Kiushiu-Tandai (Viceroy of Kiushiu), and engaged to occupy this office, the leadership of the Daimiôs of the island, alternately with Nabeshima, the Daimiô of Saga (Hizen) every

second year. But between these two most influential houses, Iyeyasu placed a number of barons of his own creation, great and small, in order to limit their power. Thus we have already seen how, after Konishi's death, he gave his rich and beautiful province of Higo in fief to Katô Kiyomasa; then, in 1621, to the Hosokawa, a house which was strong enough to oppose its southern neighbours, and which in after times frequently did so. Bungo, the former dominion of the Ôtomos, was dismembered; two jealous rivals, the houses of Ogasawara in Buzen and Kuroda in Chikuzen, were placed in opposition to the diminished territory of the house of Môri in Chôshiu, south of the important road of Shimonoseki, where they at the same time formed the northern district of Hizen. The same ingenious system was carried out in the other large islands. Thus the loyal house of Ii received the rich inheritance of Ishida Mitsunari, the domain of Hikone in Ômi, and thereby became a reliable outpost to Kiôto. In the same way the beautiful province of Aizu was taken from the old family of the Uyesugi, who henceforth were obliged to content themselves with Yonezawa in the north, and given to a vassal, whose successors afforded in 1868 a fine example of unwavering fealty.

The laws of Iyeyasu, or the Testament of Gongen-sama,¹ as they are often more characteristically called, are the legacy from the mind of this great man, intended to serve his successors as a guiding rule wherewith to secure for themselves the Shôgunate, and for the country peace and prosperous development. The very fact that for three hundred years they fulfilled this object, lends them great importance. But they are also of great value to us for the understanding of the state of society as well as of the course of thought and conduct under the Shôgunate of the Tokugawas. Whilst Iyeyasu based his work partly on the already existing feudal rule, partly on the principles of the Chinese sages, Confucius and Mencius, he attached himself to the prevailing ideas and conditions and created a code, which, as the most important legislative production of Japan, offers much of interest even in comparison with the codes of European nations dating from the feudal age.

Iyeyasu took as the starting point for his laws, Confucius' doctrine of the five universal duties (Go-rin) and relationships of men to one another, viz. that between sovereign and subject, parents

¹ A good translation appeared in 1874 at Yokohama by Mr. J. F. Lowder, under the title "The Legacy of Iyéyas (deified as Gongen-sama): a Posthumous Manuscript in One Hundred Chapters, translated from three collated copies of the Original." A year before Mr. P. Kempermann had already published a valuable German translation in the first part of the Transactions of the German Society of Eastern Asia, etc., under the title: "The Laws of Iyeyasu." Finally, in the Transactions of the Asiatic Society of Japan, Vol. iii. Part ii. 1875, we find an interesting discussion of them by an English barrister, Mr. W. E. Grigsby. There is considerable evidence to show that this document was composed not earlier than the time of Iyemidzu, the grandson of Iyeyasu.

and children, husbands and wives, brothers and sisters, and friends. Thus like Confucius he rightly considered the family as the groundwork of the state, and the head as the basis of the family. On this ground and from religious considerations the family must be maintained. A means for rendering this possible, when the family would otherwise have died out, was by adoption.

"The laws of Gongen-sama are divided into two parts. The first comprises the eighteen laws by which the founder of the Tokugawa rule, a year before his death, deprived emperors and princes of the last remains of their independence, and put into the hands of his successors the means by which they could destroy in the germ any refflorescence of the shattered power of the vassals. The other part contains the so-called hundred laws, which were however, properly speaking, not the laws of the land, but were only to serve his successors as a guide for the conduct of the government" (Kempermann). These laws were not published; it was, indeed, the express wish of their originator that they should be shown to none except his descendants and the councillors of state. They were principally settled rules of conduct which they were to lay to heart, in which case they would rarely wander far from the right path.

In our days and with our ideas of justice and law, we can scarcely conceive of a nation obeying and being judged according to statutes of which it is designedly kept in ignorance. Analogies may however be found in the legislation of Aryan peoples, for instance, the codes of Solon and Lycurgus; for even in Hellas, and Sparta too, the knowledge and administration of the laws belonged to the privileged aristocratic classes. Custom far more than the written word, was the guiding star of conduct with the Japanese, as it is with us and with all nations.

The hundred chapters (laws) of Iyeyasu's works are without logical order. Only 22 are really legal enactments, 55 others relate to politics and administration, 16 consist of moral maxims and reflections, and in the rest the author relates episodes of his life. If we follow further the analysis which Mr. Grigsby gives, this testament of the Gongen-sama resembles other old codes in several points, but above all in the fact that Iyeyasu draws no distinct line between law and morals, between the duty of the citizen and the virtues of the member of a family. He who obeys the laws is virtuous, exactly in accordance with the conception of Confucius and his disciples. Substantive law is entirely wanting. As life was ordered in the separate clans according to custom and not according to agreement,—and as there was but little intercourse between neighbouring principalities,—laws of contract, laws relating to personal property, trade and navigation, find no place in this code. On the other hand, Iyeyasu dwells much upon the criminal laws, including the offences and punishments for each particular crime; on the legal relations of the separate classes of

society ; on etiquette, rank, precedence, administration and government. He further lays down exact regulations for the exercise of private revenge, and for personal satisfaction for injuries received. In proportion as the governments of olden times were too weak to protect the subjects, these, and especially the military classes, reserved the right of self-help, of private vengeance, of which the American lynch law is an example. Thus then Iyeyasu also, guided by the views of Confucius and by the military classes, who were jealous for their honour, granted that he whose father or feudal lord had suffered violence, should be allowed to avenge himself within a prescribed time, if he made the necessary declaration of his intention to do so. Thus with the Japanese, as with most ancient nations, the law prevailed—an eye for an eye and a tooth for a tooth.

The distinctions of class, as they had gradually been formed by feudalism, are clearly marked in the testament of Gongen-sama, and are the subject of particular consideration. The Japanese were at that time divided into three sharply defined groups—namely the Mikado house with the court nobility (Kuge) in Kiôto, the military class or Samurai, and the labouring class or the people (Heimin).

*The Mikado.*¹—The right and authority of the Mikado were and are grounded on the belief in his divine descent. This doctrine of the Son of Heaven (Tenshi) asserted and maintained itself through all the vicissitudes of ages, despite the *de facto* powerlessness of the bearer of the dignity, the incapacity and even vulgarity of his character. Honours conferred by him were always considered the highest distinctions which could fall to the lot of any subject, not excepting the all-powerful Shôgun. Nor was the absolute power of the Mikado the only consequence of his divine descent, but also the secluded cloister-like life to which he was more and more driven from the time when the dualism in the state developed, since his consecrated person must not be brought into too close contact with ordinary humanity. No one insisted more upon this consequence or used it more to his own advantage than Iyeyasu. His principle was *suaviter in modo* and *fortiter in re*. With a semblance of the greatest reverence and loyalty, he took from his lord what power and influence his predecessors in the administration had left him, and reduced him to a mere shadow. The argument employed by Iyeyasu that it is not fitting for a descendant of the gods, who to a certain extent acts as a mediator between his earth-born subjects and his heavenly ancestors, to mingle

¹ Mikado=great place. Other designations of the Japanese Emperors are Tennô=King of Heaven, Tenshi=Son of Heaven, Kôtei=the sublime ruler, Dairi or Ôuchi=great Interior, Go-sho=imperial place, Kinri=the forbidden grand palace, Kinri-sama=Lord of the Palace. Though I attempt here to point out what is most important in the position of the Mikado, I must not omit to mention that, in order completely to comprehend it, a full and profound study of the modes of thought of the Japanese people is necessary.

with the people and to trouble himself about their worldly affairs. Therefore he has entrusted this humble charge to him, the Shôgun and Lord of the Kuwantô, and to his successors, who are responsible to him for everything. But this responsible servant, the Shôgun, lays down laws for the lord from whose hands he formally receives title and fief, which he in point of fact obtained with his sword. Henceforth the Mikado shall no longer make the pilgrimage to Ise in order to learn on the way the sufferings of the people, for these are now the affair of the Buke (the war nobility), nor shall he at any time leave his palace, unless he wishes to pay a visit to his predecessor who had abdicated, and whose residence, Senkôkiu, was not far distant from his own. In this "esclavage doré du Goshô," as Bousquet rightly calls this situation, the hereditary rulers of the land lived in the indissoluble bonds of a strict etiquette, as the secluded and invisible idols of the Japanese nation.¹ It must here again be pointed out that this state of things did not originate with Iyeyasu, but was fundamentally in existence before, and that he only used it to his own advantage and aggravated it. It had gradually come about, partly on the Chinese model, but above all in consequence of the enervating life of the court. The servant settles even the income of his great lord, fixing it at 10,000 Koku (about £9,000). At the close of the eighteen paragraphs in which he sets these forth, he again thinks really, or ostensibly, that he is, properly speaking, only a servant, and says: "That I have in these righteous provisions laid down laws for my lord, fills me with fear; but I have written them because I have received the imperial command that henceforth only the Buke are to conduct the government and have the care of the peace of the empire." For the rest, Iyeyasu entirely adopted the religion of the people, and left the Mikado the right of bestowing empty titles on the living and of deifying the dead. On this account the latter was formerly often called the spiritual ruler, or pope, of Japan, as opposed to the temporary ruler, or Shôgun. "Dairo was formerly the monarch of Japan, but now he is their pope."² ("Index to the celebrated Dutch embassies," etc.). The palladia, or symbols of the imperial power (see p. 214), were the mirror, as an image of the sun goddess; the seal, or instead of this a ball of rock crystal; and the sword; the brocaded banner was later on added as the fourth.

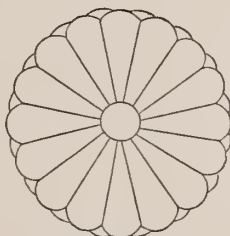
¹ Except his wives and chief ministers, no subject ever saw the Mikado's face. When he gave audience, which rarely happened, and only in the case of privileged subjects, he sat on a throne of rushes behind a curtain. His feet must never come in contact with the earth. When he went through the streets of the town, he rode in a heavy, richly decorated carriage drawn by oxen, in which was placed a seat shut in on all sides.

² There are in fact some analogies to be found between the position of the Mikado and that of the pope. The dogma of Infallibility, for instance, was also applied to the Mikado.

The ordinary coat of arms, or mon,¹ of the Mikado is a chrysanthemum flower (Kiku-no-hana) which is at the same time the emblem of the sun. It is represented with sixteen rounded petals (see illustration), which proceed from a small circle in the centre, and which at their outer edges are rounded and connected by sixteen small arcs which represent a second circle of flower radii. We find this imperial badge amongst the public documents of the government, on the banners and cockades of the soldiers, on coins, etc. A second coat of arms, which is of a more private character, and is only used by the family of the Mikado, represents, but in a form that can scarcely be recognised, three leaves and clusters of flowers of the Kiri (*Paulownia imperialis*). The leaves are put together like those of the clove, and are connected through their central nerves by a ring. Of the three clusters of flowers which rise symmetrically above, the centre one, proceeding from the ring, bears seven flowers, whilst the two side ones each display only five.

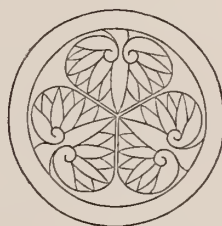


KIRI-NO-MON.



KIKU-NO-HANA-NO-MON.

ARMS OF THE MIKADO.



AOI-NO-MON.

ARMS OF THE TOKUGAWA.

The dynasty of the Mikado is the oldest on earth, even if we only date it from Jimmu Tennô. Considering the prestige which it has at all times, down to the present day, enjoyed with the Japanese people, and the very liberal arrangements made for keeping up the family, this fact is not particularly striking. The Mikado has one wife of equal birth with himself, called Kôgô, who, as already stated (see page 226), must belong to one of the first five Kuge families (Gosekke). But besides this, he possesses the right to twelve concubines, who are taken from the lower Kuge families. If the Kôgô provides him no successor, a child of one of the concubines steps into the inheritance, and if he is altogether childless, the succession passes on to one of the Shinnô (princely families of the Imperial House) Fushimi or Arisugawa. Besides this, at the worst, adoption could still be resorted to.

¹ There are no complicated escutcheons like ours in Japan, but only simple family badges, which, however, in antiquity and object, perfectly supply the place of arms. Only in this sense do we speak therefore of the arms of the Mikado or any Japanese family.

The Kuge or the court nobility, altogether 155 families, were next the Imperial House in rank, and much higher than the feudal nobility, not excepting the Shôgun. They all trace their origin to former Mikados. They looked with pride on their ancestors, even when, as was often the case under the Shôgunat, they lived in the greatest poverty. Their dwellings surrounded the Imperial Palace in Kiôto. Holding nearly all the hereditary offices at court, they were for the most part insufficiently employed and paid. Many occupied themselves with the study of Chinese literature, some few with art. To be drawn by oxen, when travelling, was one of the privileges which they shared with the Imperial family, but this they usually did not use from want of means. In earlier times they were the governing and most influential class, but when feudalism developed under the Tairas and the Minamotos, their importance in the state diminished; they also lost at the same time their landed possessions. Two classes were distinguished; the first of them, to which belonged the races of Fujiwara, Sugawara, Tachibana, and Nakatomi, dated their genealogy almost as far back as the Imperial House, while the lower Kuge, such as of the Taira, Minamoto, Kiowara and several other families, branched off from the Mikado house after the Christian era. The importance of the great Fujiwara race has already been indicated; of the other very old Kuge families, the Nakatomi long formed the hereditary higher priesthood in the worship of ancestors.

The military class during feudal times, Shôgun, Daimiôs and Samurai. Apart from the Imperial family, there were in Japan properly two great classes of society, one privileged with strict organization according to rank and income, and one without such privileges. The first were all Samurai,¹ entitled, and indeed bound to carry swords, free from taxation, with hereditary revenues and generally with hereditary functions also. All the offices of the state were filled by Samûrai; they wielded sword or pen. The Heimin or common people formed by far the most numerous class of the population. At the time when feudalism broke up there were, amongst something like thirty-four million inhabitants of the country, about two million Samurai. For twelve centuries the supreme power lay in the hands of the Kuge and mainly in those of the especially privileged Fujiwara family. Flattery, intrigues, and every kind of corruption were the means of which the Fujiwara made use to maintain their influence. They supplied their puppets, the Mikados, with wives and concubines. The Taira generals replaced them; then came the victorious Minamoto Yoritomo and systematically laid the foundation of the feudal order, on which Iyeyasu afterwards placed the topstone of the building. Yoritomo's vassals were the founders of the feudal aristocracy, or Buke, and

¹ The word Samurai is here chiefly used in its general signification, an official and lord, and comprehends Daimiôs and their vassals.

the Daimiôs of after years are to be regarded as their representatives both in descent and position. This new nobility of the sword grew and flourished at the expense of the old nobility of the court and of office. Iyeyasu represents this transference of power and influence as taking place in accordance with the will of the Mikado. In the fifteenth paragraph of the eighteen laws he says: "Because the Kuge governed slackly and were not able to maintain order in the country, there remained no alternative but for the Buke to receive from the emperor the command to undertake the ancient government. But with slender revenues it is impossible to govern the land, to give food to the people, or to perform the public services. The Kuge would commit a great wrong, if they were to make light of the Buke. According to the old saying, 'All land under heaven belongs to the Tennô.' The Mikado has been commissioned by heaven to nourish and train up the people, and therefore he commands the Buke to take care for the peace and good of the country."

Thus, then, even in the time of Yoritomo, the lands from which the court nobility had hitherto drawn their revenues were rapidly passing into the hands of the military chieftains, and these again shared them with those through whose arms and keen swords they had acquired them. Under the Hôjô, Ashikaga and Tokugawa, this state of things remained essentially the same, only that the owners of the fiefs frequently changed, until under Iyeyasu order was established. After all, the Mikado was the true lord paramount, and the Shôgun only *primus inter pares*; yet the latter had usurped this lordship and exercised it, as regards the Buke, in everything save name. The military hierarchy is at the same time that of the feudal system. At the head stands the Shôgun; then follow nearly 250 Daimiôs, and finally their vassals and those of the Shôgun, the Samurai in the stricter sense. The Daimiô,¹ or Buke, formed the military or territorial nobility. Every separate Daimiat was a feudal kingdom in miniature. The means for its subsistence were drawn from the land tax on the Hidakushô or peasantry. The produce of the soil was calculated in Koku² of rice, of which about one-half fell in the character of rent to the feudal lords, while the rest remained for the cultivator. Each Daimiô had at least 10,000 Koku of revenue, *i.e.* (according to the explanation in the note) a lordship which produced as a minimum 10,000 Koku of rice, or their equivalent in other produce. Iyeyasu divided the

¹ Daimiô signifies "great landowner," and Buke, "military."

² The Koku is a measure, equal to 180·39 litres. The value of a Koku of rice varies between 2½ and 5 dollars. In the earlier estimate of the revenues of the Mikado of 10,000 Koku = £9,000, the Koku was taken at 18 shillings, or 4½ dollars. The estimate of the revenue in Koku came from the Bakufu or the government of the Shôgun in Yedo. A Daimiô of 60,000 Koku was one whose territory produced so much rice or its equivalent, and therefore, generally speaking, was six times as important as that of the feudal lord of 10,000 Koku.

whole class of this feudal or Yedo-nobility into Sanke, Kokushiu, Tozama, and Fudai. In the *Bukan* (Military List or Military Mirror) of 1862 are enumerated: 3 Sanke, 36 Kokushiu, 75 Tozama, and 141 Fudai, making altogether 255 Daimiôs. The Sanke and Kokushiu were usually named after the provinces which were wholly or chiefly under their lordship, *e.g.* Satsuma, Hizen, Chôshiu, Owari, Sendai, Nambu. Almost all the Daimiôs took the title of Kami,¹ lord, and affixed it to the name of a province, which for the most part did not belong to them. Thus, *e.g.* the Daimiô Matsudaira, who resided in Matsumaye in Yezo, was called Matsudaira Idzu no Kami (Matsudaira, Lord of Idzu); Ômura Tango no Kami held the lordship of Ômura in Hizen, Nambu the lordship of the same name with a residence at Morioka. He was called, however, Lord of Mino (Nambu Mino no Kami). From the three provinces of Kadzusa, Hitachi, and Kôdzuke no Daimiô might take his title; nor was it permissible for two at the same time to call themselves Mutsu-, Mikawa-, Musashi-, or Echigo-no-Kami.

Iyeyasu gave his three youngest sons the richest fiefs, with the exception of Kaga, Satsuma, Mutsu, and some others belonging to powerful Daimiôs, whose land, for prudential reasons, he did not touch, and whose fidelity he could only hope to secure by a good understanding with them. These three sons of Iyeyasu received the provinces of Owari, Kii, and Mito, and formed three families, which under the title of Sanke, or Gosanke (three exalted families) stood at the head of the Daimiôs, and were held in great honour. Frequently they are also called after their chief towns, Nagoya, Wakayama and Mito. Their respective revenues amounted to 610,500, 559,000 and 350,000 Koku. When a Shôgun died without direct heirs, the Sanke of Owari and Kii had to appoint among their sons a successor in the Shôgunate; moreover, like the Shôgun himself, they bore the family arms of the Tokugawa. These consisted of three heart-shaped leaves of the Awoi, a species of *Asarum* (*A. variegatum*) in a circle, whose tips meet together in the centre. These arms of the Tokugawa are still to be found commonly in the temples and their gates at Shiba, Uyeno, Nikkô, and elsewhere, as well as upon many objects which belonged to the family (see p. 34).

The Kokushiu (lords of provinces) were for the most part sprung from the governors under Yoritomo, several also from family connections and vassals of Iyeyasu. The knowledge of their names, possessions, and chief towns, is of importance for the better understanding of many subsequent events, and we therefore here present a list of them.

¹ The word Kami has many meanings in Japanese. Here, as the title of a feudal lord, it must not be confounded with the designation of God (Shin).

| Family Name. | Lordship. | Residence. | Produce in Koku of Rice. |
|--------------|--|-----------------------|--------------------------|
| Mayeda . . | Kaga, Noto and Etchū . . | Kanazawa . | 1,027,000 |
| Shimadzu. . | Satsuma, Ōsumi, South Hiuga and Loochoo Islands . | Kagoshima | 710,000 |
| Date . . . | Sendai (Mutsu) | Sendai . . | 625,600 |
| Matsudaira . | Echizen | Fukui . . | 320,000 |
| Matsudaira . | Aidzu (Iwashiro) | Wakamatsu | 230,000 |
| Hosokawa . | Higo | Kumamoto ¹ | 540,000 |
| Kuroda . . | Chikuzen | Fukuoka . | 520,000 |
| Asano . . . | Geishū (Aki) | Hiroshima . | 426,000 |
| Mōri . . . | Chōshū (Nagato) and Suwō | Hagi . . . | 369,000 |
| Nabeshima . | Hizen | Saga . . . | 350,000 |
| Ikeda . . . | Inaba | Tottori . . | 350,000 |
| Ikeda . . . | Bizen | Okayama . | 315,000 |
| Hachisuka . | Ashū (Awa) | Tokushima | 257,900 |
| Yamanouchi . | Tosa | Kōchi . . | 242,000 |
| Arima . . . | Chikugo | Kurume . . | 210,000 |
| Sataki . . . | Akita (Ugo) | Akita . . . | 205,800 |
| Nambu . . . | Nambu (Mutsu) | Morioka . . | 200,000 |
| Uyesugi . . | Yonezawa (Uzen) | Yonezawa . | 150,000 |

Of these eighteen great Daimiōs of the country, the three first-mentioned were called great Kokushū; Echizen and Aidzu were relatives of Iyeyasu; Sataki and Nambu traced their descent from Hachiman Tarō, and thus belonged to the oldest Bukeye races. These eighteen Kokushū were followed by as many Kamon (members of the family), all relatives of the Tokugawa, with the name of Matsudaira. Their possessions varied from 10,000 to 200,000 Koku. Next to them were the Tozama (outside lords) with possessions of 10,000–100,000 Koku. They numbered in the time of Iyeyasu, 86; later, 91–100. The name is supposed to denote that they were outside the house of Tokugawa, *i.e.* were neither in a family nor feudal relation to it. Most of them formed collateral branches of the Kokushū.

The Fudai (successful races) formed the last and most numerous group of Daimiōs. In 1862 there were 115 of them, whose revenues varied from 10,000 to 350,000 Koku. Sprung from the vassals of Iyeyasu, they constituted the main support of his house. In particular the 18 families—Honda, Katō, Torii, Itakura, Toda, Ōkubo, Tsuchiya, Nagasaki, Ogasawara, Akimoto, Sakakibara, Sakai, Ishikawa, Nakane, Kuze, Abe, Akagami, and Izawa, who had faithfully served the Mikawa chieftain, were distinguished as old Fudai. They were to be regarded as relatives (Kin-shin) of the Shōgun house, and were to be called to fill the highest offices, which, according to Iyeyasu's directions, were never

¹ The castle built by Katō Kiyomasa at Kumamoto (see illustration, p. 324) was one of the strongest and largest in Japan.

to be entrusted to the other Daimiôs, or to the Samurai. The Gotairô (honourable great senior), or Regent, who had to carry on the government during the minority of a Shôgun, was always to be chosen from the four great Fudai houses—*Ii*, Honda, Sakakibara, and Sakai. At the head of these and of all the Fudai was *Ii*, lord of Hikone in Ômi, with 350,000 Koku, while Sakakibara, Daimiô at Takata in Echigo, and Sakai, Lord of Himeji in Harima, had each 150,000 Koku of land, and Honda, at Zeze in Ômi, 60,000 Koku. The Fudai house of Tôdô, at Tsu in Ise, with 353,900 Koku, alone rivalled the house of *Ii* in its landed possessions, but was without its great influence.

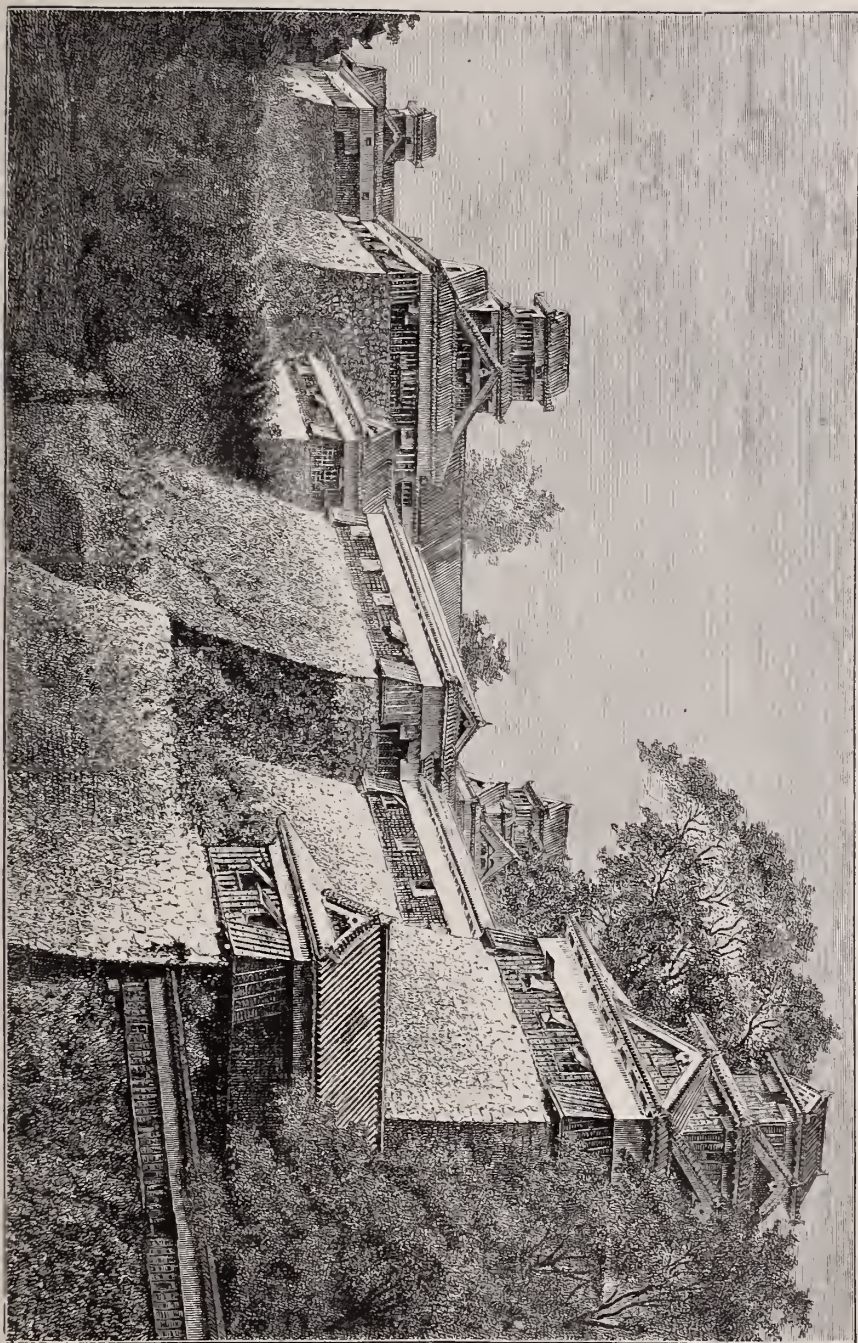
The possessions of all the feudal lords of Japan here mentioned were settled hereditary fiefs, which could only be changed or taken altogether from the family by the will of the Shôgun; in the latter case, all the under-vassals lost at the same time their inherited rights.

In the ninth paragraph of the 18 laws, Iyeyasu forbids the princes of the western provinces to pass through Kiôto on their journeys to Yedo, even though the Mikado should bid them do so. At least, from this time forward, the Rakuchiu, *i.e.* the ground upon which stood the Mikado's palace, and the district of the Kuge, might not be entered by them under any circumstances, and the whole chief quarter of the town lying on the right bank of the Kamo-gawa, only with the special permission of the Shôgun.

The Daimiôs are further forbidden in the 10th law to apply directly to the Mikado in order to obtain higher titles. Marriages, moreover, between Kuge and Buke families might only take place by permission of the Bakufu,¹ or the Shôgun's government. To secure the constant observance of these strict measures, and the preservation of peace in Kiôto, one of the most trustworthy and powerful of the Fudai Daimiôs was required to garrison the fortress of Nijô, and at the same time to act as governor of all the western provinces. The reconstructed castles at Ôzaka and Fushimi, which Iyeyasu calls the keys of the country, and their garrisons, were likewise entrusted to tried governors.

The close dependence, however, into which, with regard to the Shôgun, the Daimiôs of the country were brought by all these regulations, was crowned by a measure taken by Iyemitsu and his son Iyetsuna, which infringed more deeply upon the rights of individuals, and was of more momentous consequences than all that had hitherto been accomplished in this direction. It consisted in this, that all the Daimiôs were forced to regard Yedo as their proper residence, and to live there every second year with their families,

¹ The word "Bakufu" (pronounce "Bakfu") signifies literally the curtain-government, from "baku" and "fu." This designation refers to the curtain with which, in former times, the head-quarters of the Shôgun was surrounded when he was in camp.



PART OF THE CASTLE OF KUMAMOTO.

who had to remain there as a sure guarantee for their good behaviour while they were in their provinces. The custom of paying a yearly visit to the feudal lord, and of testifying their loyalty by the offering of presents and in other ways, was a tolerably old one. The visit was formerly paid to the Mikado, but now to the Shôgun. Accordingly Iyemitsu directed that the Daimiôs should henceforth live half of the year in Yedo; but the direction was more in the form of an invitation than of a command. Moreover, he went out to the nearest suburb to meet his visitors in a friendly way, and bid them welcome. They made a documentary attestation of their fealty, and formally sealed it with their thumb-nail and blood from the middle finger of the right hand. Gradually, however, the Shôgun discontinued the practice of going out to meet them, the visit became compulsory, and was minutely regulated. The Bakufu fixed the time at which each feudal lord had to appear before the Shôgun, the strength of his retinue, the mode of giving place on the highway, the amount of gifts to be made at court, and many other things. At the various mountain passes and entrance-gates to the Kuwantô (see p. 11) guard-houses were erected and placed in charge of neighbouring Fudai, who had to see that every person, no matter what his rank, was subjected to a rigorous examination, lest the wives or children of the Daimiôs should secretly leave Yedo, to go to their native provinces. The progresses of the Daimiôs themselves from and to Yedo were celebrated with great pomp, and consisted of a greater or smaller number of Kerai, according to the rank of the feudal lord. They brought vivacity and traffic to the highways and the places through which they passed, and were of such extent that one often touched another. Numerous and extensive inns (Yadoyas) and tea-houses (Chayas) provided for physical requirements; female dancers and singers (Geishas) for evening entertainment. The procession was preceded by a Sakibure, or quarter-master, and wherever he announced a halt for dinner or for the night the house was most carefully cleaned, and everything prepared for a fitting reception. The rooms, covered with fine rush-mats and separated by movable walls, were provided with old bronze or porcelain vases containing a few blossoming boughs of some favourite ornamental plant, and the Hibachi (fire-box), with glowing coals for warmth or for the purpose of lighting the little pipes. The girls and women, who had to wait upon the guests, appeared in full dress, which involved a plentiful use of various cosmetics, and in cheerful mood.

At the head of the procession, which, in the case of the greatest Daimiôs, consisted of from 600 to 1,000 armed retainers, went the herald, a sign from whose fan, and his cry of "Shitaniro" (prostrate yourselves), sufficed to send to one side and upon their knees the people who met the procession. Any horseman who encountered it had to dismount and lead his horse to the side of the road, and any one who wore a head-covering, even though it

were nothing more than a blue cotton cloth about his forehead, had to take it off. This was an established rule, and those who disobeyed it insulted the feudal lord, and must expect that those nearest them in the retinue would step forward and strike them down.

The residence of a Daimiô in his lordship was called Jôka. Here he lived in his Shiro, or castle, which, as in the case of the castles of many Asiatic princes, and of our mediæval fortresses, usually crowned a hill, and was surrounded by one or more systems of broad moats. A high cyclopean wall arose on the innermost margin of the moat, and enclosed the castle site. Wooden structures, raised at the ends, and there provided with several storeys like a tower and with casemates, crowned this wall. The dwelling of the lord of the castle, as well as the houses of the higher officials, were situated further inward. Usually a park-like garden was added to the whole. Next to the castle, between the wall-moats, or outside them, came, the Yashiki or dwellings of the Samurai. These were generally situated in well-kept little gardens, somewhat aside from the road running past them, towards which they were bordered by a green hedge. A simple wooden arch-gate, with an inscription, was placed above the entrance to the little domain.

The whole of the land occupied by the houses of this privileged class, inclusive of the castle, was called the Yashiki-ground, in opposition to the adjoining lower town, or Machi, where the traders and artisans dwelt. The same state of things was repeated in Yedo, only on a more extensive scale, and with the difference that here the Yashiki of the Daimiôs came next to the Oshiro, and with their parks and outbuildings for the Baishin frequently occupied considerable tracts.

The Samurai (Sinico-Jap. Shi, or Bushi), in the ordinary, narrower sense of the word, formed the privileged military class of the Shôgun and the Daimiôs.¹ They were their vassals with hereditary revenues of under 10,000 Koku. Only a small portion had landed property; most of them lived, to a certain extent, from their lord's table; received from his magazines, in return for very slight services, their regular allowance of rice for small families of from three to five persons, and were, in weal and woe, entirely dependent upon the fortunes of their lord. The term "lower nobility," so often applied by Europeans to this Samurai class, is not calculated to give a correct idea of their position and importance. Except in their pride, there is hardly any affinity between them and our smaller nobles, even though the starting point of the latter was pretty much the same. It would be more appropriate to compare these Samurai with the former Strelitzes of Russia. Not so much in virtue of their individual position and importance, as of the power and

¹ The priests were likewise included in it.

intelligence represented by their total of some 400,000 households, they formed, until quite lately, the most influential and leading class of Japanese society. They were the legitimate bearers not only of the sword, but also of the national honour and of the peculiar forms in which the Japanese sense of honour found expression; and all the political revolutions, including those last and memorable ones which brought about the fall of feudalism, originated with them. The great mass of them consisted, as Mr. Adams rightly points out, of careless, idle fellows, who knew no other obligation than obedience to their lords, for whom they were ready at any moment to lay down their lives, either on the battle-field or in defending him against murderers, or even by suicide, voluntary or prescribed, whenever honour or the interests of the family required. The Samurai's ideas of honour forbade him to embark in any occupation which was associated with money-making, and led him to look down with contempt on the artisan, and especially on the shop-keeping class; though he might engage in agriculture.¹ The duties of this great mass of the Samurai class consisted in serving as soldiers in time of war, and in peace in keeping guard over the castle or dwelling of their lord, forming part of his retinue, and appearing upon festive occasions in ceremonial dress. A small portion of them were distinguished for their military exercises and studies; the majority seemed to be born for eating, drinking, smoking, and for excesses in tea-houses and places of public resort. They were people who had no higher ambition than to keep their swords in order and gird them on and strut about; who regarded the lower classes with scorn, and found delight in cutting down those by whom they imagined themselves to be insulted. Many Samurai were Rônin (wave people, Samurai who had lost their natural lord and their rights), and wandered about as such, without master or law, ready for any villany. Yet even among the Rônin there were some who had lost house and income not through evil acts or a taste for vagabondage, but from honourable causes. Many of these passed over into one of the three classes of the people. We can easily understand that so numerous an unproductive class, with its privileges, must in the end become a great burden to the people, and a serious hindrance to its material and moral development.

There were likewise several classes among the Samurai. At the head stood the Hatamoto (Banner supporters).² They formed the core of the Shôgun's army, were his immediate vassals, soldiers and officers, having sprung from good old families and

¹ This occurred, however, only in a few lordships, such as Satsuma and Tosa. We may assume that some part of the greater physical strength which the braver Samurai of these classes exhibited, as compared with the others, is to be ascribed to this circumstance.

² From hata, "banner," and moto, "foundation, root."

famous warriors among the Minamoto. They came next in rank to the Fudai-Daimiôs, might like them appear before the Shôgun (were, therefore, admissible at court), and ride on horseback upon the highways as well as in Yedo. Their incomes varied from 500 to 9,999 Koku. Each of them had from three to thirty vassals. A Hatamoto might hold any administrative office below the Council of State. Most of the civil and military officials beneath the fifth rank, all the so-called Yakunin (functionaries) of the Shôgun—such as ambassadors, interpreters, spies, stewards of smaller castles and of gardens—as well as the body-guard of the Shôgun, etc., were taken from this class. If a Hatamoto showed himself specially capable, and deserving of promotion to higher office, he became a Fudai, by the raising of his income to 10,000 Koku. There were about 80,000 Hatamoto families, of which by far the greater number lived in Yedo and Sumpu (Shidzuoka). A second class of the Shôgun's Samurai formed the Gokenin. These were the common soldiers of the Shôgun's army, and the lower government officials. They had incomes up to 500 Koku, might not ride in Yedo or on the highways, and had in everything to observe a courteous and obliging demeanour towards the Hatamoto, who were in many cases their lords and superior officers.

All vassals of the Daimiôs bore the name Kerai, or Baishin, *i.e.* double vassals, or servants of servants. They cared only for the interests of their own feudal lords, and if their lords belonged to old families and had large possessions, looked down with disdain upon other Samurai. Thus the Kerai of a Daimio of 100,000 Koku thought more of himself than the Kerai of a feudal lord of only 10,000 Koku. But if they came to Yedo, then the 40th law of Gongen-Samra applied to them all, which enacted that the Baishin, whether they were Hatamoto or Gokenin, and irrespective of whether their incomes were relatively great or small, must observe towards the immediate vassals of the Shôgun the same courtesy which they showed to their own princes. Accordingly the highest officials, even the Karô (ministers), bowed in the humblest fashion before all Samurai in the service of the Shôgun, whenever they came to the palace at Yedo.

Filial affection and feudal loyalty even to death were the highest duty, and the sword the greatest pride, of a Samurai, from the Daimiô down to his doorkeeper. The latter duty was in accordance with the injunctions of Confucius, who says, "Thou shalt not lie beneath the same sky, nor tread on the same earth, with the murderer of thy lord." Under the influence of this teaching, Iyeyasu permitted the avenging of blood, though he required that he who wished to wreak it, should announce this to an officer appointed for that purpose, and should fix the time within which he would and must carry out his resolve. If he failed to do this he was treated as a common murderer and was punished accordingly. The most splendid and interesting example of feudal fealty is

furnished by the history of the Daimiô of Akô and the forty-seven Rônin, which stirs and elevates the heart of every Japanese, much in the same way as the story of Tell acts upon us.¹

Among all the privileges which the Samurai enjoyed over the common man, there was none that he prized more highly than the right, indeed, the duty, of carrying a sword. Such expressions of Iyeyasu as, "the buckling on of the sword lends the Samurai war-like spirit," and "the sword is the soul of the Samurai," were borrowed from the inmost feeling of the class, and therefore contributed much to their lively sense of honour, so that a very special importance was attributed in Japan to this most chivalrous, and among all peoples most highly esteemed of weapons. Skilful sword-cutlers were the most respected of craftsmen, and often rose to high rank. Their names became as famous as many of the swords which they had forged for distinguished heroes, and which are still preserved and exhibited in the temples as precious reliques. The older Japanese swords, called Ken, were straight, nearly a metre long, six or seven centimetres broad, and two-edged. They were carried across the back, and were swung with both arms. When later the Ken was bisected lengthways, and somewhat shortened, another weapon was devised, the Katana, or ordinary sword of the Japanese, with a blade slightly curved towards the end, the hilt of which was often richly ornamented. The Samurai carried this, either alone or together with a second, dagger-like weapon, either perpendicular, or sloped obliquely on the left side. The smaller weapon was called Wakizashi, and its blade was in later times shortened to 9½ inches (27 centimetres). It was the weapon with which the Seppuku (slitting up the belly) was performed.²

The Samurai never went out without his sword, and even a boy going to school had one buckled on, as I myself had an opportunity of observing in Satsuma as late as 1875.

Swords were not allowed to be worn in dwelling rooms, either in official or social life. There were swordstands provided in every Samurai house, just as with us there are contrivances for the reception of overcoats, sticks, and umbrellas, at the entrance. It was considered a signal favour and a mark of the utmost confidence when the Mikado allowed Iyeyasu to appear before him with his sword. When any one wished to draw his sword out of the scabbard he was obliged to ask the permission of the company. To run up against any one with the scabbard was a gross breach of etiquette; to turn the sword in the

¹ An extremely instructive and readable edition of this "Feudal Fealty," appeared from the pen of my friend, Dr. J. A. Junker von Langegg, in 1880, at Leipzig (Breitkopf and Härtel).

² This is the meaning of the allusion in a popular song of the period of the Japanese revolution (1868). "The gift which I should like to offer to the Lord of Aidzu (at that time the most unpopular personage with the enemies of the Shôgunate) is 9½ inches on a tabouret," *i.e.* a dagger to slit up his belly with.

scabbard, as though to draw it forth, was equivalent to a challenge; and to lay it down on the bare ground, or to knock contemptuously against the swordstand, a mortal insult.

But the most striking and peculiar custom, one to which the Japanese Samurai were very early led by their high sense of honour and chivalrous feeling, but which only acquired a fixed set of rules on the development of feudalism, is the Harakiri, Seppuku, or slitting up of the belly.¹ This mode of suicide, quite peculiar to Japan, was in the eyes of the Samurai the most honourable and dignified of all violent deaths, whether it was the result of choice or of a penal decree. The Harakiri was considered the best means of restoring injured honour, if revenge was impossible, or of avoiding inevitable punishment for malversation in office, or beheading by the enemy in a lost battle; and when the government was obliged to condemn a Samurai to death for any offence, it was regarded as a great favour, if the condemned person were allowed to inflict it upon himself with his own hand in the presence of friends and witnesses. Under any circumstances, the Seppuku cleansed from every stain, and insured an honourable interment and a respected memory.

If the self-destroyer after slitting up his abdomen still retained sufficient strength and presence of mind to turn the dagger round and to thrust it into his throat, or if he could after doing this replace it in the scabbard, this was considered an act of the utmost possible knightly bravery, and was lauded for many generations.

Especially ceremonious was the carrying out the Harakiri when it had to be performed as a punishment, a custom which was first introduced by the Tokugawa Shôguns. It then took place by night under the open sky, in a temple, or an apartment specially prepared. If the condemned person was a man of position, the chamber was hung with white silk and feebly illuminated. On a slightly raised platform in the room thus prepared the doomed man took his place upon his knees, with his face turned towards the north. His friends and the witnesses of the act silently disposed themselves in a wide circle around him. The appointed officer then read the sentence, and handed, on a white tabouret of Hinoki-wood, the short dagger-like sword (*wakizashi*), the blade of which was wrapped round to within a few inches of the point, and placed in a simple white scabbard. The condemned hereupon uttered his last wishes, and once more begged the friend crouching at his side, to pay him the last mark of respect, and after the fatal cut had been made to strike off his head with the selected sword. He next calmly took into his left hand the weapon offered him, bared it, and with the utmost apparent equanimity made a cut of from 20 to 24 centimetres, from right to left below his navel, while immediately afterwards the friend standing behind him

¹ A detailed account of it may be found in Mitford's "Tales of Old Japan."

severed the head from the trunk with a sure blow, and exhibited it to the witnesses of the act.

All expressions of feeling were suppressed at the Harakiri. It was a sign of the greatest manliness, highly regarded by the whole nation ; the slightest fear, a mere tremor, would have excited contempt.

The Heimin, or common people, were divided into three classes. The highest in rank were the Hiakushô or peasants, among whom the larger landholders might even carry swords ; then followed the Shokunin or handicraftsmen, and finally came the Akindo¹ or shopkeepers.

Outside these various classes of society stood the Etas and Hinin, who were despised as pariahs. The Etas (unclean) were knackers, tanners, and leather-dressers ; besides which they had also the function of grave-digging. They lived separately in special places or quarters of the towns, possessed an organisation of their own, and some of them had great wealth. They were forbidden to marry with persons outside their own class. Members of the higher classes never entered their houses, and were not allowed to eat and drink with them. The origin of the Etas has not been clearly ascertained. Probably they were descendants of butchers, who fell into this position of contempt when Buddhism became predominant, and the Mikado Temmu (672-686) in consequence forbade animal food, a law which indeed afterwards was not very strictly observed, except by a few sects. The Hinin (not-men) formed a class of paupers, who first appeared with the ascendancy of the Tokugawa, went about in rags and dirt, and lived upon alms. They were allowed to settle upon uncultivated land. One of their occupations was the carrying away of corpses from the places of execution, and the burial of them. They also were only allowed to marry with those of their own class. The Yamabushi, a group of low, despised mendicant monks, who were descended from soothsayers and magicians, associated with them. All these outcasts belonged to the free-thinking Buddhist sect of the Ikkôshiu (Shin), which has in recent times enjoyed so much respect.

Geshas (female dancers and singers) and Jôrôs (prostitutes), in short, all who served the purposes of pleasure, were despised, and considered to stand, as a necessary evil, socially below the level of the Hinin. Actors also were like these of low origin, and did not hold a much higher position in the social scale.

¹ After the recent opening of Yokohama and other ports to foreign intercourse, hardly anything repelled and hurt the Samurai more than the hitherto unknown independent bearing of the foreign merchants, whose social position they at first measured by that of the Akindo.

C. Relations of the Dutch, English, and Russians to Japan during the Shôgunate of the Tokugawa.

SCARCELY had the Dutch, towards the end of the sixteenth century, shaken off the Spanish yoke, than they began to extend their commerce in all directions. Hence, impelled by mercantile interests and prompted by the lofty aspirations of their spirit of enterprise, they became, at the close of the sixteenth and in the first half of the seventeenth century, leading discoverers and the founders of rich and extensive colonies. In Eastern Asia, Jakatra (Batavia) in Java was their principal basis of operations, whence their ships bore the Dutch flag north and south to the islands and western shores of the Pacific. As early as 1600, one of their ships appeared at Funai in Bungo. Its two English pilots, William Adams and Timothy Shotten, who went on shore with a portion of the crew, were kindly received by the Japanese, but not by the Portuguese. The latter charged the Englishmen with piracy and various offences, and were supported in their complaints by a portion of the crew. Shortly afterwards Adams was sent as a prisoner to Iyeyasu at Ôzaka, who received him kindly and examined him. Adams was no friend to the Jesuits, could build ships, and impart instruction in mathematics and astronomy, and was therefore welcomed by Iyeyasu. The latter soon released him from his imprisonment, sent him to Yedo, and made use of his abilities. Will Adams gained considerable influence, was made a Samurai and endowed with the revenues of a village called Hemi (near Yokosuka), received a house at Yedo, but was not permitted to leave the country. On his death, in 1620, a beautiful tomb was, in accordance with his desire, erected to him on one of the hills on the Bay of Yedo. In Yedo, moreover, a street was named in commemoration of him Anjin Chô (Pilot Street).

The opening of Dutch commerce with Japan was effected by Spex and Segersohn about 1610. In the negotiations which took place at Suruga before Iyeyasu, and then before his son, the Shôgun, at Yedo, Adams acted as interpreter and spokesman. The accommodating Dutchmen were evidently very welcome to the Tokugawa; from these men, whom commercial interest, not missionary zeal, had brought to Japan, could be secured all the commercial advantages which the hated Namban had brought, and they could also be much better employed than the Jesuits as instructors in cannon-founding, gunpowder making, and many other useful and desirable arts. Besides this, the dislike of the new strangers to the Portuguese and Spaniards and their religion, was scarcely less than that of the leading natives; nay, it is asserted, and not without reason, that the charges of danger to the State, and many false accusations against the Jesuits and their doctrines, which led to the bloody persecution of the Christians

already described, were actually fostered by the Dutch and English. Nay, still more; accounts of the thoroughly trustworthy and well-informed Kaempfer, and other indications, hardly leave room to doubt that in the last great measure against the native Christians, namely the siege and capture of Arima and Shimabara, the Dutch did not hesitate to give a specimen of their obedience and their enmity to Catholics, which might well satisfy the Japanese. "Our Resident Koekebacker," says Kaempfer explicitly, "betook himself with the still remaining ship to Shimabara, and within fourteen days bombarded the besieged Christians from the ship as well as by land, with 426 great cannon shots."

In pursuance of the licence which Adams and Spex had obtained from Iyeyasu for Dutch commerce, Spex established a factory on a little island in the harbour of Hirado. Almost at the same time the East India Company sent out three ships from England under the command of Captain John Saris, with a letter from King James I. to the Emperor (Shôgun) of Japan, also for the purpose of establishing commercial relations with this country. Saris reached Hirado in June, 1613, but found no very cordial welcome from either the Dutch or the Portuguese. Two months later he visited Iyeyasu in Sumpu with Adams, who had been sent to him by Iyeyasu, and then visited the Shôgun in Yedo. He was well received by both, obtained from them a commercial charter subscribed by Iyeyasu, by the eight articles of which equal freedom of intercourse was conceded to the English as to the Dutch, and three months later returned to Hirado. After there experiencing a good deal of trouble with mutinous sailors, and establishing a factory which he put under the charge of his colleague Captain Cocks, he returned to England, and soon afterwards laid before the Directors of his Company a full report of his experiences in Japan and of the most important articles of trade with that country. At first affairs went on satisfactorily; but there followed such a falling off, in consequence of various limitations imposed by the Shôgun contrary to the treaty, and especially of the jealousy of the Dutch, who employed all their efforts to drive their rivals from the field, that the factory was at length broken up, and Captain Cocks returned to England.

It was not till 1673 that another attempt to renew commercial intercourse with Japan, on the basis of the old agreement, was made by the English. The plenipotentiaries however, who arrived at Nagasaki with the ship *Return* in the June of the following year, after long hoping and tarrying, had to return without accomplishing their purpose, because the then King of England, Charles II., was a son-in-law of the King of Portugal. England at that time was at war with Holland, so that, apart from commercial interests, it can hardly be doubted that the traders in De-shima were lucky enough to discover this potent reason why the Bakufu should reject the English overtures.

Towards the end of the century the idea of commercial intercourse was again taken up by the East India Company, but again allowed to drop. The attempts which were made by private individuals in the next half-century likewise remained without success, and thus, so far as the English are concerned, we have only to mention the share they have taken, in connection with the enterprises of other nations, in the exploration of the more distant Japanese waters and island-groups during the period of the Tokugawa Shōgunate. We must here especially refer to Captains Broughton and Beechey, whose names, with those of Vries, La Pérouse and Krusenstern, deserve a place in the first rank.

Martin Gerritszoon van Vries, the most enterprising Dutch navigator of Japanese waters, sailed northward with the ships *Castricom* and *Bresken*, together with H. C. Schaep, the captain of the latter, by command of the General-Statthalter Van Diemen at Batavia, in 1643—or exactly a hundred years after the landing of Pinto at Bungo—and discovered the Shichitō islands, one of which (Ōshima) then received his name, the island of Yezo and a number of the Kuriles, as well as the passage between two of them, Iturup and Urup, which still bears the name of Vries Straits. He was followed by the famous Frenchman La Pérouse, who by sailing through the channel called after him, demonstrated in 1787 that Yezo and Saghalien did not form a continuous tract of land, but were two distinct islands, and was thus the first European to pass from the Sea of Tartary into the Sea of Okhotsk. He did not however correctly ascertain the contour of Yezo, and the map therefore which the famous English cartographer Arrow-smith prepared from his data in 1803, was only a caricature of the true proportions, and in particular makes the Tsugaru Straits much too broad. A more precise survey of these straits and of the south and west coast of Yezo was made ten years later by the English captain, W. R. Broughton, who coming from the Sandwich Islands in the autumn of 1796, with the corvette *Providence*, made the coast of Nambu, and then turned further northwards towards Yezo. He gives in his narrative a good account of the Ainos and of the country about Volcano Bay, which he discovered and named. After paying a visit to the Kuriles, and vainly endeavouring, in consequence of the strong current, to force his way through the Tsugaru Straits, he turned southward along the east coast of the main island as far as Yedo Bay, into which however he could not sail because of unfavourable winds; and consequently directed his course south-west, and passing the Loochoo Islands and Formosa reached Macao. Soon afterwards, in May, 1797, he again left this port for the purpose of continuing his discoveries of the previous year, but was wrecked on a coral reef very near Miyakeshima (one of the southern Loochoo Islands), and returned in a little schooner which he had taken with him to Macao, though only to disembark a portion of the crew, take in fresh provisions, and

pursue his undertaking in the little ship. In the course of it he visited Nafa, in the large Loochoo Island of Okinawa-shima, and left two pairs of geese with its friendly inhabitants, then turned his course past the large Japanese islands and again made his way into Volcano Bay in Yezo. Struck by the hostile and unfriendly behaviour of the Japanese on the coast, in contrast with their previous affability, he steered through the Tsugaru Straits past Matsumaye, and then northward along the west coasts of Yezo and Saghalien, as far as lat. 52°, when he turned southward along the Asiatic continent, discovered the bay called after him, on the east coast of Corea, sailed past Tsushima, and finally returned to Macao. To the perseverance and careful observations of Broughton, who despite many serious adversities, such as the breaking of an arm, and the loss of his corvette, nevertheless steadily pursued the task imposed upon him by the British Admiralty, we are indebted for the first correct map of the Island of Yezo and the Sea of Japan.

Among the visits paid by English ships of war to the Japanese coast in the first half of this century, that of Captain Pellew in the *Phaëton*, in September, 1808, is chiefly deserving of mention. It happened that the inhabitants of Nagasaki had been long expecting the arrival of a Dutch vessel from Batavia, and were delighted when one was signalled from the entrance to the harbour. The mistake, however, was soon discovered, and not only all Nagasaki, but even the coast and the surrounding country were thrown into a state of great excitement. Troops were called out to repel the enemy, who however, after taking in water, suddenly disappeared. The result was that the governor of Nagasaki and five military commanders, aware of the deficiencies which they had in their bewilderment shown, and of the punishment which awaited them from the Bakufu, committed Seppuku.

As Broughton's name is associated with the more exact knowledge of the island of Yezo,¹ so are we indebted to Captain Beechey for the first good map and trustworthy information of the two southernmost of the Japanese groups of islands—the Munintô and the Loochoo. He visited them on board the ship *Blossom*, in 1827, and by the "Narrative" of his voyage laid the foundation, upon which the Perry Expedition could subsequently operate in these waters.

The Russians, as northern neighbours of the Japanese, had already during the previous century come in contact with them in Saghalien and the Kuriles, and been led to desire a more active intercourse with Japan. The efforts, however, which Catherine II. caused to be made to effect this object, failed completely, although they were introduced by an act of friendship to Japan, in the restoration to

¹ Broughton uses also instead of Yezo the names Chicha and Insu, the latter probably from the Japanese Inu, "dog;" Inushiu, "Dog-land," because the Japanese contemptuously called the Ainos, dogs.

their country of some Japanese castaways, who, having been wrecked ten years before on the Aleutian Islands, had been saved, brought to Irkutsk, and there well treated and instructed in many useful things. The Emperor Alexander I. several times renewed these attempts, but with no better success. In his time, however, was achieved the remarkable circumnavigation of the world by Krusenstern, and his six months stay in Nagasaki (1805), which was devoted to the precise determination of the tides¹ at this place by Krusenstern himself, and many other important investigations, while the German *savants* who were on board—Dr. Horner, Langsdorf and Thilenius—were engaged in other enquiries, as well as in the collection of scientific objects. The southern point of Satsuma, as well as the western coast of Yezo and other points, were astronomically determined, and many improvements thus introduced into existing maps, which still bear several Russian names, as *e.g.* Strogonoff Bay, as memorials. The main purpose of the mission, however, viz. that of bringing about commercial relations with Japan, was not attained. The embassy, with its presents on board, returned to Kamtschatka and Petersburg as it had come.

In 1811, Golovnin, the captain of the Russian sloop of war *Diana*, lay to at the entrance into the Bay of Kunashiri, to take in water. Two cannon-shots from a neighbouring fort, and the hastening up of the soldiers, were succeeded by a long explanation, after which Golovnin and five of his crew were invited to come ashore, where they were first entertained with tea and Sake (rice-beer), but afterwards taken prisoners, and led in chains to Hakodate. Here they again recovered their freedom, were allowed to go on board the *Diana*, which was summoned up for the purpose, and to continue their voyage, and to this they had to submit without further parley.

After these brief notices of the English, French and Russians in Japan, we return to the Dutch, and now briefly consider the rôle which their 250 years' monopoly of trade with Japan imposed upon them. We shall see that it was no honourable one—that they were induced by great commercial advantages to limit their freedom of action as if they were prisoners, and to submit to the deepest degradation of their national and individual dignity.

On the 11th of May, 1641, a command was issued from Yedo that the Dutch should give up their factory at Hirado, should remove to Nagasaki, and there take possession of De-shima, which had been formerly assigned to the Portuguese. Their departure took place ten days afterwards.

The little island of De-shima (De-shima, fore-island) only 600

¹ Krusenstern determined these to be 7 hours 52 minutes 41 seconds long, and proved that high water rises generally to 7 feet, but sometimes to from 9 to 11 feet, and is highest 41 hours and 35 minutes after full and new moon.

feet (185 metres) in length and 240 feet (74 metres) in breadth, lies close to Nagasaki, and is an artificial formation, consisting of a piece of land reclaimed from the bay, which was protected by a wall towards the harbour, and separated by a narrow channel from the town. It has the form of an open fan, and is raised only two metres above high-water mark. It is connected with the town by a little stone bridge, at the end of which was a gate, to enable the communication to be strictly watched. In this little islet, guarded and confined like prisoners, lived from sixteen to twenty Dutchmen in the service of the East India Company, to carry on the trade with Japan. Their chief bore the title of Resident. De-shima contained the dwellings of the officials, the magazines, a small botanic garden and a road traversing the island, upon which abutted the open square upon which the Dutch flag was hoisted. In accordance with the terms agreed upon, at first only one ship, but afterwards eight came yearly from Batavia. Their arrival was always an exciting event to the little colony thus shut off from the world. The average value of the yearly trade is estimated at £660,000. The profits on the export of silver (afterwards prohibited), gold, copper, silk, camphor, porcelain, bronze,¹ were very great, so that the company, in spite of the high salaries which they had to pay their officers, and other considerable expenses, including £2,000 for the annual visit of the Resident to the court, and the presents that had to be offered upon this occasion, made splendid profits. Kaempfer observes, with regard to this and to the degrading position of imprisonment at De-shima :—

“In this service we have to put up with many insulting regulations at the hands of these proud heathens. We may not keep Sundays or feast-days, or allow our spiritual hymns or prayers to be heard ; never mention the name of Christ ; nor carry with us any representation of the cross or any external sign of Christianity. Besides these things we have to submit to many other insulting imputations, which are always very painful to a noble heart. The only reason which impels the Dutch to bear all these sufferings so patiently is simply the love of gain and of the precious marrow of the Japanese mountains.”

In addition to the Japanese guard at the entrance-gate to De-shima, there was exhibited upon a great notice-board the regulations (Kinsatsu) with regard to the De-shima-machi (De-shima Street). According to these, no women, with the exception of prostitutes, might set foot upon the soil, and no priests or bonzes, except those of Kôya-san, nor any beggars. No one was permitted, upon any pretext whatever, to come in a boat within the palisades or under the bridge ; finally, no Dutchman was to leave De-

¹ According to a tolerably reliable calculation, the Dutch exported from Japan in the period from 1609 to 1858, 206,253 tons of copper, silver to the value of 28 million pounds sterling, and gold to the value of 15½ millions sterling.

shima without proper reasons or except within the prescribed time. The Resident had to journey once a year to Yedo, to offer to the Shôgun his respects and presents. The day fixed for his departure was the fifteenth or sixteenth of the first month of the Japanese year, *i.e.* the fourth or fifth of March. The Resident on these occasions travelled as a Daimiô, and like the Bugiô (governor) who accompanied him, in a palanquin (Norimono), the other higher officials in basket-litters (Kago) or on horseback. He was usually accompanied by his Dutch secretary and the physician of the little colony. The preparations for the journey occupied a great deal of time and were made in accordance with fixed rules. The procession consisted of from one to two hundred persons, principally bearers, and included various Japanese officials, among them interpreters and spies (och uppassare, Thbg.). Thunberg, who made this "Resan til Hofvet" as physician in 1776, and also Kaempfer, who twice took part in it (1691 and 1692), have left us the most detailed and interesting descriptions of it. The road was from Nagasaki by land to Kokura, then across the Straits of Shimonoseki, and thence along the Sanyôdô to Ôzaka and Miyako (Kiôto), finally from here by the Tôkaidô to Yedo. The rooms of the hostleries (Honjin, Yadoya) at which they halted on the way were locked and guarded, "in order, as they say, to protect us against annoyance and thieves, but really to watch us like thieves and deserters" (Kaempfer). Apart, however, from this burdensome supervision, all the honours and attentions usually shown to the Daimiôs were paid to the Dutch travellers.

During the stay of the Dutch in Yedo they were allowed no freedom of movement, and everything took place according to a prescribed order. On the day of audience, the presents for the court had to be set out in the room of the palace appointed for the purpose, and invitations were issued to view them. Kaempfer mentions among them Borneo camphor, Spanish wines, Edam cheese, linens and silks, and other European industrial productions. At the audience, which took place in the Hall of a Hundred Mats, the Dutch Resident was summoned to offer his reverence to the Shôgun, who usually sat behind a curtain, upon which the Resident "crept forward on his hands and feet, and falling on his knees bowed his head to the ground, and retired again in absolute silence, crawling exactly like a crab. In this," continues Kaempfer, "consists the entire ceremony, for which such elaborate preparations have been made. It is exactly the same with the Daimiôs." When this exhibition was over, the envoys were led further into the palace, to give the women and the rest of the court the pleasure of beholding them, in which amusement the Shôgun also shared. The Resident then remained passive, and the rôle of Kaempfer and the Secretary began, which judging from the story of our candid countryman, was by no means an enviable one; indeed it was a monkey-like comedy which the Emperor called for. "Now

we had to rise and walk to and fro, now to exchange compliments with each other, then to dance, jump, represent a drunken man, speak broken Japanese, paint, read Dutch and German, sing, put on our cloaks and throw them off again, etc.; I for my share singing a German love ditty." Kaempfer appears to have had the reputation of a good singer, for upon other occasions also he was invited to sing a song, to take part with the Secretary in representing various modes of behaviour in Holland, and to do such other things as might serve for entertainment and for the gratification of curiosity.

When the representative of the Dutch Company took his leave of the Court, he had to bind himself not to enter into any connection with the Kirishitan-shiu (Christian sect, *i.e.* Catholics), not to bring any missionaries into the country, and every year to give the court such information as to the Christian sect, as should be of interest to the Shôgun. Whether this information was repeated annually is not certain, though we know that Zacharias Wagenaer furnished it for example in 1659 and 1661, and also that it was given in 1673.

That the Dutch (Oranda-jin as they were correctly named—Akage, red-hair, or Akaban, red barbarians, as they were contemptuously called) patiently endured this slavish position, with all the insults that accompanied it, cannot but surprise us. We might be inclined to regard the account of their submissiveness to the Japanese as an exaggeration, but the reports of the physicians mentioned are only supplemented and confirmed by others. By way of comparison we may refer, for example, to what Krusenstern tells us in the first volume of his "Travels round the World," p. 290, etc., from his own observations of the insolence of the Japanese and the obsequiousness of the Dutch. Among other things, Myn Heer van Doeff, the Resident, enters with an impudent Japanese interpreter, and the Bugiô or governor appears on the other side. "Myn Heer Opperhooft," orders the interpreter, "complement bevoor de Opper Baijô." The Opperhooft (Director) does not fail most obediently to make a low obeisance, but his compliment is not returned by the slightest inclination of the head.¹ The Japanese, however, made the Russians submit to their full measure of humiliation also. Krusenstern depreciates the services of the Dutch to navigation during their long intercourse with Japan, and points out that the important scientific labours proceeded from foreign surgeons in Dutch service. Without wishing to decide in this res-

¹ The Resident mentioned, Hendrik Doeff, must, however, have felt quite at home in his hardly enviable situation, for he kept it from 1804 to 1817. In his "Herinneringen uit Japan," he has forgotten the occurrence here related, and probably many others. He was the author of a large Dutch-Japanese Dictionary. He has a bad reputation amongst the English, because in 1808 he incited the Japanese against the *Phaëton*, under Captain Pellew, and indeed would have been glad to see the English ship and its crew destroyed.

pect between Germans, Swedes, and Dutch, we must point out that the Dutch company, at least, found the surgeons, E. Kaempfer (1690-92), C. P. Thunberg (1775-76), and Ph. Fr. von Siebold (1823-29, and 1859-61) the opportunity and the means for labours, which have secured for their names so high a place in the history of scientific discovery in Japan.

Though Kaempfer did not neglect the natural sciences, and particularly botany, yet his chief merit lies in his contributions to history and the history of civilisation. There can be no higher testimony to his chief works, the "*Amoenitates Exoticae*" and "*Historia imperii japonici germanice scripta*," than that now, after nearly two hundred years, and when so much has been written about Japan since it has been opened to foreigners, every one who knows Japan is still glad to read them, and is convinced of the trustworthiness of their author.¹

The first naturalist of importance who opened to us the magnificent Japanese Flora, whose name is intimately associated with dozens of our loveliest ornamental plants which have been borrowed from it, and who proves himself in his four volumes to be a minute and erudite observer and describer, was C. P. Thunberg. He was born in 1763 at Jönköping, studied medicine and natural science at Upsala, and after his return from his nine years' travels in Europe, Africa, and Asia, occupied, as a botanist, the chair of his teacher, Linnæus.

Finally, the achievements of our Würzburg compatriot, v. Siebold—who was rather an unwearied and highly successful collector than an independent and profound student—are so familiar, that I hardly need mention them specially. Rarely has an individual been so successful in gathering in the most various departments all that is worth knowing of a foreign country, and in bringing it to the knowledge of Europe, as he has in his *Nippon*, *Archiv zur Beschreibung von Japan*, and his *Flora* and *Fauna Japonica*. Siebold understood how to instruct and stimulate a number of Japanese, and to make them useful to himself, while he also found distinguished Dutch and German scholars, who assisted him in providing a scientific garment for his rich collections from many departments. Finally we must also praise the munificence of the Dutch Company and the Government, who most efficiently assisted v. Siebold and his colleagues in the publication of their costly folios upon Japan.

For a period of nearly one hundred and fifty years the entire intellectual stimulus which Japan received through the Dutch, was limited to what was offered here and there by Dutch industrial

¹ Kaempfer's "German laboriousness and perseverance enabled him to bequeath to posterity a result of his twenty-six months' residence in this empire, the value of which as a whole, as a historical and scientific record, it would be difficult to exaggerate." R. G. Watson, *Trans. As. Soc. of Japan*, 1874, p. 2.

productions, such as barometers and thermometers, clocks and other objects. Then began the study of the Dutch language and the distribution of Dutch books, but it was only in this century, when the old edicts against foreigners were less stringently enforced, that more life was infused into the study. Those in whom the desire for foreign intellectual nutriment was first awakened, had to struggle with infinite difficulties, at a time when even the interpreters engaged in De-shima did not dare to use Dutch writing, and when no book in foreign type was permitted. Then Dutch books and illustrations, chiefly of a medical and technical character, were here and there sparingly introduced, and conveyed new ideas to the thinking and energetic Japanese, especially to several physicians. They diligently studied anatomy, learnt venesection from the Dutch, the Linnean and other botanical systems from v. Siebold, and much else. The study of Dutch continued to make warm friends, and progress of many kinds followed in its train. Thus, in the first half of this century blast-furnaces and mills were erected after Dutch plans, and many other industrial inventions were introduced. Printing is indebted to Dutch intercourse for many improvements,¹ and even steam engines, the telegraph, and other products of modern civilization, first became known to the Land of the Rising Sun in this way. When at length the old system was crippled, when men's minds were again awaking to independent political thought, and they ventured to express their ideas to each other, it was found that the leaven which Dutch books had introduced into many minds, had produced no slight fermentation. Among the most influential personages by whom the new era was introduced, appear many who, like Terashima, the foreign minister, or Yanagawa, the founder of Japanese journalism, had cultivated their minds by the reading of Dutch works.

SEVENTH PERIOD.

JAPAN SINCE THE YEAR 1854.

A. The Perry Expedition and its Immediate Consequences.—Treaties of Commerce with Japan.—Discontent and growing Agitation in the Country.—Murderous Assaults on Natives and Foreigners.—Bombardment of Kagoshima and Shimonoseki.—Conflict between the Bakufu and Chōshiu.

It is now about fifteen years since a movement, unparalleled in the history of Oriental nations, took hold of the Japanese and incited them to overthrow the Shōgunate together with the feudal

¹ Printing with moveable types was known and practised in Corea long before its invention in Europe, as Dr. E. Satow has shown in his elaborate essay "On the Early History of Printing in Japan" (*Trans. As. Soc. of Japan*, x. p. 48).

system, to break with old prejudices, practices and customs, to remove the great restraints upon intercourse, and to invite into their country as instructors, those who but a short time before had been hated as foreign barbarians. These political and social revolutions greatly surprised the cultivated West, which was in ignorance of the long preparations for the storm which burst forth so suddenly over the country.

The downfall and final collapse of the government of the Tokugawa began when the Shôguns, who had once been so influential, were succeeded by weaklings, and the power of individual princes of the south, like Satsuma, Chôshiu, and Tosa, had so developed that they could venture in particular cases to bid defiance to the Bakufu. The old political differences and the great disaffection of these clans towards the house of Tokugawa had not died out in the course of ages, but had been transmitted from generation to generation, and had always found fresh nourishment in the undignified position held towards the usurpers of power. This disposition at last found open expression when, after the landing of Commodore Perry in 1854, the Bakufu concluded treaties with foreigners and opened Yokohama to them. Now all the discontent in the country and the dislike of the foreigners were skilfully fostered and turned to account, and no opportunity was lost of embarrassing the government at Yedo and of bringing it into discredit with the Samurai. "Honour the Mikado, and drive out the foreign barbarians," was the cry. The Kuge and present ministers, Sanjô and Iwakura, as well as the Samurai Kido of Chôshiu, Saigô of Satsuma, and Itagaki of Tosa, undertook the direction of the movement. Shimadzu Saburô, one of the few more able and distinguished princes of the country—the greater part were young children in their minority—was entirely devoted to the cause. It had already been fostered and promoted for decades by the revived interest in the study of the old Kami doctrine and of the earlier state of things, and this essentially contributed to raise men's respect for the Mikado and to his being recognised as the rightful ruler of the country. Especially at the court of Mito, in Echizen, in Kiôto and Satsuma, people gave themselves up to contemplation of the golden past and to dreams of a return to the true religion, *i.e.* to the worship of ancestors without any Buddhist admixture, and to national purity under the guidance of the Mikado. Buddhism, Chinese influence, Confucius, despotism and Bakufu, were, in the eyes of the strict Shintôists, one and the same thing, and ought to be abolished.

"In the sixth month (5 July–3 August), 1853," so begins Shôzan Yashi in his *Kinsei Shiriaku* (History of Modern Times), "the American ambassador arrived with four ships at Uruga in Sagami,¹

¹ It was on the 8th of July, 1853. The squadron consisted of the men of war *Susquehanna* and *Mississippi*, and the sloops *Saratoga* and *Plymouth*. The

and delivered a letter, in which he asked for a treaty of friendship and commerce."¹ On the 16th of July Commodore Perry sailed away again, with the curt remark that he would come the next year and fetch the answer. This surprising occurrence greatly excited the Bakufu, the inhabitants of Kiôto and the whole country. The Shôgun commanded the Daimiôs to guard the approaches to Musashi and to put them in a state of defence. The Mikado decreed that the Shintô priests at Yamada in Ise should offer up prayers to the goddess Amaterasu for the expulsion of the barbarians. In vain recourse was had to the means previously employed to frighten them away, and efforts made to send the squadron to Nagasaki; it was felt that this case would not be settled like the previous ones, and opinions were divided concerning the position to be taken up. Whilst the counsellors of the Mikado, and also many violent adherents of the old state of things in Yedo, desired to break off all relations with the foreigners, the more influential and far-sighted party of the Bakufu felt that the strength to do so was wanting, and that on the other hand the foreign barbarians had many things worthy of imitation.

Perry allowed the Japanese time for reflection, as well as for the impression which he had made with his fleet and the letter of the North American President to have their effect, sailed away with all solemnity, turned to the Loochoos, wrote his report to America, asking for more ships, and appointed Nafa as the rendezvous. Here, through a Russian man-of-war that had arrived at Nagasaki in September in order to enter into commercial relations for Russia, he received the news that in Yedo, Iyeyoshi, the twelfth Shôgun, was dead, and his son, Iyesada, had succeeded him in the government. After he had received the desired reinforcement, he sailed again, in February, 1854, for the Bay of Yedo, with a stately fleet such as the Japanese had never before seen, consisting of eight ships, amongst them three steamers, and on the 13th of February cast anchor twelve English miles nearer the capital than the first time. Vain efforts were made to induce Perry to return to Uraga; he insisted, and at length with success, that negotiations should be entered into at Kanagawa, whilst the fleet lay near at hand in the excellent harbour of Yokohama. It was at Kanagawa that, to the great surprise and delight of the Japanese, a telegraph and railway were established, and became powerful instruments for the advancement of the negotiations, which finally led, on the 31st of March, 1854, to the so-called Treaty of Kanagawa, which first of all opened to the Americans the two ports, Shimoda and Hakodate. Perry sent Commander Adams to Washington in the *Saratoga*

commodore had before paid a long visit to the Loochoo and the Bonin Islands, of which the Narrative gives an interesting report.

¹ See the translation of the Japanese original, by E. M. Satow, Yokohama, 1869.

with the Treaty for ratification, and then, with the fleet, paid a five-and-twenty days' visit to the harbour of Shimoda, in order to take soundings, etc. He afterwards visited Hakodate with the same object. From this place he again returned to Shimoda, concluded with the Japanese authorities a supplementary treaty relating to the two ports, and then left Japan at the end of June, 1854, returning with the fleet by way of Naha to China.

Commander Adams, after a voyage of three and a half months, had reached Washington, where the treaty concluded by Perry met with such universal approval, that he was able forthwith to bring it back to Japan furnished with the President's signature. He chose the mail route by England to Hong Kong, received here the North American man-of-war *Powhatan*, and reached Shimoda on the 26th of January, 1855. The exchange of treaties with the Japanese authorities followed immediately, so that by the 22nd of February, the *Powhatan* was able to sail again.

It was Commodore Perry who had suggested the idea of the expedition called after him which ended with this result. He had conducted it with great skill and brought it to a satisfactory conclusion, thereby attaining an object of the greatest importance, and for which other nations had until then vainly striven. Japan and his native land especially, but also the whole of the civilized world, reaped the advantages springing therefrom, and must always hold his name in honour. Perry showed his knowledge of human nature and diplomatic skill pre-eminently by avoiding, consciously and with shrewd calculation, Nagasaki, the Dutch, and even the proffered services of Dr. von Siebold, and by openly declaring that the Americans would never submit to such restrictions and humiliations as the Chinese and Dutch had endured. His attitude, friendly yet dignified and decided, his elaborate attention to etiquette and splendour, without the slightest effort or anxiety to imitate the Japanese too carefully in these matters, impressed them quite as much as the power which he exhibited and the specimen of American civilization which he gave by rich presents to the court, and especially by laying down and using a small railway as well as a telegraph. Such were the means by which he attained the diplomatic object of his expedition, and opened up Japan.

As soon as this success of the United States became known, the European powers began to move; they sent ships with embassies and gifts to Japan, and successfully sought for similar favours. Russia got the start. The Russian admiral Putiatin appeared before Nagasaki, with this object, as early as September, 1852, and then joined Perry at Naha. His offer to make common cause with Perry was declined. The Russian admiral retired again from Nagasaki with his object unaccomplished, but reappeared the next year with only the frigate *Diana*, with which he had started from Petropawlowsk, and passing through the

English fleet, which was on the look out for him, safely reached Shimoda. Here the Russians experienced, on the 23rd of December, 1854, a violent earthquake, and this, together with an unusually high tide which occurred at the same time, destroyed the greater part of the town, and so injured the stately ship that it had to be abandoned. A month later appeared, as already mentioned, Commander Adams with the *Porwhatan*. The Russians sought and found refuge in a neighbouring place, and, with Japanese help, built a schooner, in which, when the negotiations with the Bakufu had been brought to the desired end, Putiatin and part of the crew sailed to Kamtschatka and thence to Nikolajewsk, while the rest of the Russian crew was taken to China in a vessel chartered for the purpose. The Dutch likewise sought in the same year to improve their position with the Japanese, and with this aim sent a war-steamer from Batavia to Nagasaki, which lay at anchor there for a long time, and which was frequented by many young Japanese that they might learn the management and equipment of such craft. Notwithstanding this, Holland did not this time attain its object.

Everywhere in Japan people were stirring. The Daimiôs received permission to equip men-of-war, and had to contribute largely to the defence of the country. Temple bells were recast for cannons, and at the entrances to the large towns, Yedo, Ôzaka, and others, batteries were erected. The Bakufu incurred great expenses for the re-erection of the palace of the Mikados in Kiôto, as well as of several temples in Shiba and Uyeno, which had been destroyed by fire the year before. In consequence the treasury of the Bakufu was soon at a low ebb.

In the year 1856 the North American Harris appeared at Shimoda as consul-general with full powers, and requested permission to go to Yedo and have an audience with the Shôgun. This threw the Bakufu into a state of excitement, but Harris pursued his aim so perseveringly that the Bakufu ultimately gave way. Consequently the princes of Mito, Owari and Kii—who were the nearest relations of the Shôgun—angrily retired from the government.

Gradually also the foreigners learnt the complicated nature of the distribution of power, and knew that the treaties hitherto concluded with the Bakufu had no legal force until the real ruler of the country, the Mikado, had ratified them. Harris, however, did not allow himself to be discouraged by any such consideration. In the middle of October, 1857, he came to Yedo, had an interview with the Shôgun (Tycoon, as he was generally called by the Americans) and his ministers, in which he requested that Shimoda, which had proved unsuitable for commerce, should be given up, and Kanagawa (Yokohama) and Ôzaka opened instead, and finally that a minister plenipotentiary from America should be allowed to reside permanently in Yedo. The Bakufu thought it necessary to lay these demands before the Mikado and his court, and here

as in Yedo, opinions were divided. Ambassadors were repeatedly sent to the Mikado from the government of the Shôgun to represent the grievous position in which he was placed. Yet the influence of those Kuge who, like Sanjô and Iwakura, wished the Bakufu to break off all intercourse with the barbarians, still prevailed; whereupon the Bakufu again declared that this was impossible, and that at Kiôto mistaken ideas of the foreigners and their power were entertained. Shortly after Ii Kamon-no-Kami, prince of Hikone, became Tairô (prime minister). He was now the predominant and guiding person in the Bakufu, and as he was afraid of the foreigners, and feared that the warning of the Dutch resident would prove true, and that Japan, if it showed itself hostile to the barbarians, would be laid waste, as the Chinese province of Kuangtung had been by the English, he at last yielded to the pressure and, without the consent of the court of the Mikado, concluded new treaties with Harris at Kanagawa, and with the English, French and Russians at Yedo.

These treaties were all very much to the same effect. The most important provisions were the following:—

1. Diplomatic representatives of the governments concerned have the right to reside in Yedo, are under the protection of the Shôgun, and may travel in the country without hindrance.

2. The treaty powers may establish consulates at all ports open for commerce.

3. Kanagawa (Yokohama), Nagasaki and Hakodate will be opened on the 1st of July, 1859, for foreign commerce, Niigata in 1860, Hiôgo and Ôzaka in 1863.

4. At each of these places a certain portion of land will be granted to the foreigners, upon which they may build after payment of a fixed tax.

5. They are to remain under the jurisdiction of their own consular authorities.

6. They are to enjoy freedom of religion and commerce, provided they pay the fixed duties.

7. Within a radius of ten ri they may move freely, but may under no circumstances go beyond the boundary without permission from the Japanese government.

Besides these and a few other provisions, each treaty contained also the clause of the most favoured nation. It is obvious that these were important acquisitions; but it soon appeared that the foreigners were not to enjoy them undisturbed.

About the time that the treaties were concluded, the Shôgun died childless, at the age of only thirty-five. When his approaching end was foreseen, his nearest relatives, the princes of Owari, Echizen and Mito, determined that the eighth son of Mito, named Shitotsubashi Giôbukiô, a popular and accomplished prince, and the favourite of his father, should be his successor; but Ii Kamon appealed to the settlement of Iyeyasu, had his own way

and secured the adoption of Iyemochi, the son of the prince of Kishiu. He was only twelve years old when he became Shôgun, so that the government now lay entirely in the hands of the Daimiô of Hikone, the Bakko-Genrô (bragging first minister), as he was called. When the relatives of the Shôgun were about to reproach him with this, as well with the treaties, Ii Kamon forbade them to set foot in the castle. Enraged at his conduct they left Yedo and accused the Tairô to the Mikado of high treason; the same thing occurred on the part of several other Daimiôs. When the court (of the Mikado) summoned Ii Kamon, and the princes of Owari, Mito and Echizen, to come to Kiôto to settle their differences, the Tairô excused himself, saying that he was prevented by manifold official duties, and remained in Yedo, where he nevertheless found time for his pleasures, and in order to defray the expenses of them, borrowed as much as 10,000 riô from the State treasury.

Soon afterwards the old prince of Mito received from Kiôto secret instructions of the following import: "The Bakufu, inasmuch as it has concluded treaties without waiting for the views of the court, and insulted princes who are nearly related by blood to the Shôgun, has shown great disrespect for public opinion. The Mikado's peace of mind has been disturbed by the spectacle of such misgovernment, at the time when the impetuous barbarian stand before our gates. Support, therefore, the Bakufu with thy counsel; drive out the barbarians, pacify the feelings of the people, and restore peace to the bosom of His Majesty."

Ii Kamon had, beside his official reporters in Kiôto, a spy who informed him minutely of all proceedings there, and also of the before-mentioned letter, as well as of the names of all those who were working against him at court. He now sent one of his ministers thither, who conferred with the governor, whereupon thirty of his opponents were arrested and sent under military escort to Yedo, where their number was increased by twenty-seven other suspected persons. The ringleaders had to choose the Harakiri or were beheaded; the others remained in strict custody. In the same year, 1859, a number of Daimiôs were put under arrest in their own dwellings, in particular the ex-Daimiô of Mito. The Daimiôs of Owari, Echizen, Tosa and Uwajima, were however forced to resign their fiefs to their sons, and to retire. These acts of violence on the part of the Tairô, increased the hatred and irritation against him and the foreigners. They did not extend to the people, who both before and afterwards showed themselves friendly to foreigners, but affected the Samurai class, many members of which in the agitation for the expulsion of the barbarians, styled Jô-i or Son-ô, were very active and ready to draw their swords on the first foreigner who came in their way.¹ The earliest blows, however, were aimed

¹ Jô-i, "expulsion of the foreigners," and Son-ô, "honour to the Mikado," were

not merely at the so-called barbarians, who now streamed in large numbers to the ports which had been opened, but chiefly at their faviourer Ii Kamon. On the 3rd of March, Rônin¹ from Mito slew him with a part of his escort at the Sakurada-gate, on his way to the castle, and hurried away carrying his head with them. A few of the murderers were left dead on the spot, while the others fled to the house of a minister, to whom they sent a letter, in which they announced the deed and the reasons for it. These were five: 1. Ii Kamon had taken possession of the young Shôgun, and for his own selfish interest had appointed or discharged officials; 2. he had allowed himself to be bribed, and had not shown himself impartial; 3. by driving away the princes of Owari, Mito and Echizen, he had deprived the Shôgun of the support of his nearest relatives; 4. he had misled the Kuwambaku through other people, had thrown Kuge and Samurai into prison and killed several of the latter; finally, 5. he had allowed himself to be so terrified by the empty threats of the foreign barbarians that, under the pretext of political necessity, he had concluded treaties with them without the consent of the Mikado. These, they said, were five crimes, which neither the gods nor man could pardon, therefore they, as representatives of the divine anger, had chastised Ii Kamon. In conclusion, they begged that the punishment of death might soon be declared against them, a wish, the fulfilment of which they had not long to wait for.

The death of the Tairô was a great loss for the liberal party, and most sensibly weakened the power of the Shôgun. The discontent in the country increased, Rônin assembled everywhere, so that the Bakufu could no longer secure the public safety, especially with regard to foreigners. This was already shown by the night attack on the English Legation in the temple of Tôzenji at Takanawa, the southern suburb of Yedo, on the 5th of July, 1861. It took place at midnight, while the Japanese watch was asleep. Two Englishmen were wounded, while the native guard gallantly repulsed the assailants. It was supposed that this outbreak of hatred against the foreigners also originated with the ex-Daimiô of Mito, who undoubtedly held at that time the guidance of the hostile movement, although most of the Rônin directly implicated belonged to the Tsushima clan.

Several murderous attacks had already preceded this; a far greater number were to follow. The last was directed against our harmless fellow-countryman, Consul Haber in Hakodate, where, in

the watchwords chosen by the enemies of the foreigners and of the Shôgunate as represented by the Bakufu.

¹ The word Rônin is here and afterwards not to be taken in its general meaning, but in the sense that they are Samurai who have renounced their hereditary lord, and the control of his government, and, urged on by hatred of the foreigners and their friends, act on their own responsibility, alone or in bodies, so that people of quite different clans often make common cause.

1874, in the middle of the day, he was struck down from behind, by a young Samurai who did not know him, and had never even exchanged a word with him. Universal hatred for foreigners, and the belief that they were rendering a service to the country and pleasing the gods (Kami), were the usual, and in some degree excusable motives, but there were also amongst the murderers many abandoned men tired of life, who counting on the general temper, wished, by the murder of a stranger, to end their lives with the semblance of a valiant and patriotic deed. The mode of attack was almost always very cowardly and crafty, however much courage and contempt for death the criminals might afterwards manifest.

Under such circumstances the condition of the foreigners and their representatives, about the year 1860, and for a few years later, was a very precarious one. Most of the foreign diplomatists manifested no slight degree of courage, skill and perseverance. They deserve all praise; for only by such qualities was it possible at last to bring about a better state of things and to help in leading Japan into other paths. In the foreground of these pioneers appear the diplomatic representatives of America, England and Prussia: Harris, Alcock, and von Brandt. Sir Rutherford Alcock, now one of the Vice-Presidents of the Royal Geographical Society, held out, notwithstanding the peril in which his life was frequently placed, and was not afraid to undertake, as early as 1860, a long journey into the interior of the country, including an ascent of Fuji-san.

We have here somewhat anticipated events, and will now add that in the year 1860 Holland and Prussia also concluded their treaties with the Bakufu. The expedition, which had to accomplish this task on behalf of Prussia, was under the command of Count Eulenburg, afterwards Minister of the Interior, to whom were joined the Secretary of Legation Pieschel and the Attachés, von Brandt, von Bunsen and Count A. von Eulenburg. Besides these, the naturalists Wichura, von Martens, the Baron von Richt-hofen; the agriculturist, Dr. Maron; the physician, Dr. R. Lucius; the artist, Berg; the draughtsman, Heine (General Heine, as he called himself after the American war of secession); the photographer, Bismark; the horticulturist, Schottenmüller, and several merchants took part in it. The little squadron which brought these officials to Eastern Asia was under the command of Captain Sundewall, and comprised the steam corvette *Arcona*, the sailing frigate *Thetis*, the schooner *Frauenlob*, and the transport *Elbe*. On the 24th January the treaty concluded between Count Eulenburg and the Bakufu, consisting of twenty-three articles, was signed, and M. von Brandt was installed as the representative of Prussia.¹

¹ The general official report, in four volumes, was published by the artist A. Berg under the title: "Die Preussische Expedition nach Ostasien," and was concluded in 1873. Besides this, appeared at the expense of the government:

At the close of the year 1861 the foreign colony in Yokohama consisted of 126 persons. They celebrated the Christmas festival undisturbed, and already rejoiced in an English newspaper, the *Japan Herald*, but otherwise had by no means a bed of roses. Everywhere the Japanese officials interfered with the intercourse between the natives and the foreign merchants, and caused them endless difficulties. It was more and more felt that relations with the Japanese were not upon a firm foundation, and the Shôgun and Bakufu could not observe the treaties, because they were not competent to make them, and their dependence on a power in Kiôto, which was awaking by degrees from its long and deep slumber, and continually gaining more influence, became more and more apparent.

At the beginning of the year 1862, the first Japanese embassy left for Europe in an English war-steamer, which had been placed at their disposal, in order to induce the Treaty Powers to consent to a postponement of the expected opening of Hiôgo, Ôzaka and Niigata. All the events of the year showed that the influence of the Mikado was growing, and that the Bakufu was trying as far as possible to conform to it. The still imprisoned Kuge were set free, and the other arrangements of Ii Kamon disregarded, his spies and other helpers punished, and the Bakufu transformed. The former Daimiôs of Owari and Echizen, as well as Shitotsubashi, were gaining great influence with the Shôgun, while in Kiôto the triumvirate "Sat-chô-to" (Satsuma, Chôshiu, Tosa) were obtaining power over the Mikado.

At the desire of the Mikado an assembly of the powerful Daimiôs of the country was convoked at Yedo, in order to discuss the state of the country with the Shôgun and his ministers, as well as with the Kuge Ôhara in his function of representative of the Mikado. To this conference journeyed also Shimadzu Saburô, the father of the Daimiô of Satsuma. On his way to Kiôto he fell in, at Himeji, with several hundred Rônin, who begged him to be their leader and co-operate with them in establishing the Mikado in his rights and expelling the foreigners. He tried to calm them and left them behind in Fushimi, where later on they and his vassals committed great slaughter. His dislike of the foreigners, which was shared by his followers, was increased still further by what he saw and heard in Yokohama.

The Bakufu had sent to ask the foreigners during this time of great excitement, when the high-roads were unusually thronged by the trains of the Daimiôs, to avoid the Tôkaidô, but a small party of English from Yokohama paid no attention to the warning, and

"Ansichten aus Japan, China und Siam," as well as the zoological part and the Algæ, by E. von Martens and G. von Martens respectively. Different members of the expedition have published their observations separately, as Werner, Maron, Spiess, Heine.

were riding thither on the 14th September, 1862, just as the long train of Shimadzu Saburô came along the road from Yedo. There were three gentlemen and a lady; they spoke of turning back, but one of the party, a young merchant called Richardson, from Shanghai, insisted upon riding on, declaring he knew how such people must be treated. Now the custom of the country required that, in such a case they should either turn into a side path, or dismount and wait at the side of the road. The followers of Shimadzu, already far from entertaining any friendly feeling towards the foreigners, looked upon their behaviour in this case as an insult to their lord which must be revenged on the spot. Several Samurai accordingly left the procession, unsheathed their weapons, and with their big swords fell upon the party pitilessly. Two of them escaped with slight wounds and together with the lady safely made their way by the speed of their horses to Yokohama, but Richardson fell from his horse fatally wounded and died shortly after. The immediate result of this "Richardson affair," which made a great commotion, was that the Bakufu had to pay £100,000 compensation, Satsuma £25,000 more, and the English demanded that the murderers should be delivered to them. This request was not complied with, and in August, 1863, followed the bombardment of Kagoshima by an English squadron under Admiral Kuper, when in spite of a valiant defence, the town was all but destroyed, and three steamers belonging to Satsuma were captured.

As early as the spring of this year, and thus before the English squadron had appeared before Kagoshima, an assembly of the Daimiôs had taken place in Kiôto, in which the Shôgun, in consequence of the urgent summons of the Mikado, had also taken part. On the 8th of April an edict from the Mikado was read out to the assembly, in which he desired the expulsion of the obnoxious barbarians. The prime minister of the Shôgun, the ex-Daimiô of Echizen, was to fix the day on which the wish of the Tennô was to be carried out; he however, in consideration of the great difficulties, resigned his office. The Mikado now proposed to undertake with the Shôgun a pilgrimage to the temple of the war-god Hachiman in Yamashiro, in order to deliver to him the sword of Ôjin-Tennô with which to drive out the barbarians. The Shôgun however feigned indisposition, and did not go; his relative and adviser Shitotsubashi followed his example. The ex-Daimiô of Ôwari was appointed adviser to the Shôgun, and the prince of Hizen was named Inspector-General of the army. Soon after, the buildings of the English and American legations in Yedo were burnt down.¹

Everywhere in the country the Samurai were stirring, and, like the court in Kiôto, impatiently waiting for the Bakufu at last

¹ Participants in this at that time "patriotic" deed, six years later held high offices, and were among the most zealous promoters of Western civilization.

to fix the day for rising against the foreigners; but this did not happen, although in Yedo a strong inclination prevailed to obey the command of the Mikado. The more clear-sighted members of the government soon saw that the foreigners had no wish to withdraw of their own free will, and that they could no longer be expelled by force. This correct estimate of the situation was substantially furthered by the appearance of the imposing English fleet before Shinagawa, the southern suburb of Yedo, with the object—which was attained—of effecting the long-deferred payment of the indemnity mentioned above.

An American merchant-steamer was passing, in June, 1863, through the Seto-uchi (Inland Sea) on its way from Yokohama to Shanghai. When near Shimonoseki it was vigorously fired upon by two men of war belonging to the prince of Chôshiu, as well as by shore-batteries, and with the utmost difficulty escaped by the Bungo-nada. The same thing happened ten days later to a French man-of-war. The Dutch corvette *Medusa*, making her way from Nagasaki to Yokohama through the Strait of Shimonoseki, was likewise violently fired upon here by the batteries and ships, and returned the fire energetically without sustaining injury. When the news of the first-mentioned occurrence reached Yokohama, the American corvette, *Wyoming*, was at once ordered to avenge the insult offered to the star-spangled banner. The engagement which ensued before Shimonoseki, in July, made no slight impression on the Japanese, and proved to be much more effectual than the bombardment by the French war steamers *Semiramis* and *Taocrède*, under Admiral Jaurez, which soon afterwards followed, and in which a landing was effected and a battery destroyed.

The Chôshiu clan (Nagato and Suwô) became more and more the gathering-point of all the discontented.¹ Not only was a ship of the Bakufu fired at in the same year from Shimonoseki, but also one belonging to the prince of Satsuma. The result was that for a long time Satsuma and Chôshiu were on hostile terms. When after this, followers of the latter, presumably in concert with seven Kuge, amongst whom were Sanjô and Iwakura, were suspected of an attempt to carry off the Mikado, which the vigour and precaution of the prince of Aizu and his troops prevented, these Kuge were banished to Chôshiu, while Aizu was praised and rewarded by the Mikado, and complete harmony re-established between him and the Bakufu. Both blamed the proceedings of the Chôshiu clan with regard to the bombardment of the ships. The affair did not, however, end here. At the instigation of the over-zealous English envoy, Sir Rutherford Alcock—although England had not been injured by Chôshiu, and the honour of the other three

¹ Disturbances also arose elsewhere, as in Yamato, where a band of over 1,000 Rônin had been organised, and proceeded to an open fight with the troops of the feudal lord.

nations had received full satisfaction—a great fleet was assembled, consisting of 9 English, 3 French, 4 Dutch, and 1 American man-of-war, and Shimonoseki was bombarded on the 5th and 6th of September, 1864. The place defended itself bravely, but in vain; the ships and batteries were reduced to silence, taken, or destroyed, and Chôshiu compelled to beg for peace. It was a bitter lesson, not only for Chôshiu, but for the whole country, for it had to pay an indemnity ("the Shimonoseki Indemnity") of three million dollars—\$785,000 each to France, Holland, and the United States, and \$645,000 to England—and this by instalments, the last of which was only paid long after an entirely different state of things had come about in Japan.

The conduct of England on this occasion has been severely blamed—and rightly so—and also of the other representatives for allowing themselves to be so much influenced by Alcock. On the other hand, it must be granted that it was just these two lessons, which the Japanese received at Kagoshima and Shimonoseki, that mainly contributed to induce them to give up more and more the idea of expelling the foreigners, and to effect a change in the opinions of the most influential men, whose hatred for the foreigners had formerly known no bounds. Above all, Satsuma and Chôshiu, the most warlike, and by reason of their great valour the most esteemed of the clans, had learnt the superiority of the foreign weapons and warfare, and were now eagerly striving to appropriate both. In Satsuma, a Samurai called Saigô Takamori, who afterwards played an important part, had gained great influence. He was one of the first there to see that it was in vain to attempt the expulsion of the foreigners, and that, for good or evil, the hatred of them must be forgotten, and that Japan must learn from them. And he succeeded in making his opinion prevail throughout the clan. He then allied himself with Kido of Chôshiu for the settlement of the differences between the houses and Samurai of both territories, and after he had succeeded in this, for the pursuit of their common aim, the abolition of the Shôgunate, and the development of the power of Japan under the Mikado as the legitimate ruler of the country. They were united with several other leading men in preparing the ground on which the Mikado could take his stand, and demand the power, which of right belonged to him, back from the hands of the Shôgun. In the year 1868 the four most powerful feudal lords of the south, Satsuma, Hizen, Chôshiu and Tosa, carried out the will of the Mikado, and in a bloody civil war destroyed all the opposition which the old feudal fidelity in the north, and the dislike of the southern clans, could offer. Satsuma and Chôshiu hated the Tokugawa and their party from olden times, and placed themselves at the head of this movement, not so much from patriotism, though this may have been the motive power with individuals, as that they might themselves play an important part, as is clearly enough to be seen from the later

attitude of the former, which always claimed precedence of the other clans.

The independent hostile acts of Chôshiu were not confined to what has been mentioned above. In the year 1864, before the chastisement by the allied fleet had yet been experienced, many hundreds of Chôshiu men led by Karôs (the chief counsellors of the clan), assembled in and around Kiôto, although they were forbidden to enter the capital. For its protection, troops of Satsuma, Echizen, Aidzu, and other principalities, as well as the Regent Shitotsubashi were there. These were ordered to hold themselves in readiness for an attack on the intruders. The townspeople packed up their effects and prepared for flight. A murderous struggle arose in the streets and houses of the town, many of which broke out into flames. The Chôshiu Rônin were overpowered. A short time after this event, the embassy returned from Europe, delighted with what they had seen there, so that a member of it broke out with the words, "not the foreigners, but we ourselves are the barbarians!" The Bakufu was, however, but little edified by this result of the mission, reprimanded the members, and deprived them of their offices.

Chôshiu had suffered much also from internal party quarrels; nevertheless the Bakufu, in 1865, in pursuance of an earlier decision, equipped an army, entrusted it to the supreme command of the Daimiôs of Kishiu and Buzen, and sent it thither in order to inflict punishment for all its deeds of violence. Satsuma ought also to have furnished auxiliaries, but refused the obligation of following the army, with the declaration that Chôshiu had been chastised enough. Under the command of Inouye Bunda the latter gathered all his strength together and defeated the army of the Shôgun, who thereby lost a great part of the prestige he yet enjoyed. The Bakufu was obliged to conclude peace with Chôshiu, and to look on while the great clans from this time went their own way.

In the end of September, 1866, the Shôgun Iyemochi, twenty-one years of age, died in Uzaka, and Shitotsubashi was his successor. By this time hatred of the foreigners had disappeared from the minds of all enlightened and influential Japanese. Satsuma had already invited to Kagoshima, and sumptuously entertained, the new English envoy, Sir Harry Parkes, and had also entered into friendly intercourse with other foreign representatives, while the Mikado had confirmed the treaties with the foreigners. Worthy of notice is a memorandum which the Daimiô of Echizen had a year before addressed (1865) to the Mikado, in favour of the foreigners, and of which a few passages may find a place here. "Western foreigners of to-day differ essentially from those of former times. They are much more cultivated and liberal. . . . It would be a positive misfortune to close the country and to drive out the foreigners. Besides this, there are five great and

powerful continents, and even if all Japan were united, it would be an unequal conflict to drive out the foreigners. Japan would be shattered like a roofing tile. The cry of: Drive out the foreigners, comes from those who do not know them."

All the efforts of one party were now directed towards the restoration of the government of the Mikado, and of the other towards maintaining that of the Shôgun of the house of Tokugawa. Both strove for the favour of the foreigners, imported war materials, and looked out for foreign instructors. Japanese youths were sent to Nagasaki and Yokohama, where they diligently learned English and other European languages, from missionaries and other foreign teachers; the prohibition to leave the country was done away with, and many youths were sent abroad to study Western civilization. Its first pupils returned about this time, after a five years' sojourn, by command of the Bakufu, in Holland and England, on board the *Kaiyô Maru*, one of the steamers bought for the Shôgun, under the command of Enomoto Kamajirô, who was now Admiral. In consequence of all these favourable relations with the foreigners, the Powers concerned found themselves induced to reduce the Shimonoseki Indemnity by one half.

The beginning of the year 1867 saw the death of the Mikado, Kômei Tennô, on the 3rd of February. His son Mutsuhito succeeded him as 121st (according to another reckoning 123rd) ruler of Japan.¹ The new Shôgun soon after invited five of the most prominent Daimiôs to a consultation at Kiôto, where the request of the foreign ambassadors, that the port of Hiôgo should at length be opened, came under discussion. The Shôgun advocated this to the Mikado, it was approved of by most of the Daimiôs, and the opening of this, as well as of Ôzaka and Yedo, followed on the 1st of January, 1868. The Bakufu continued indeed to conduct the government, but in all important affairs consulted the court at Kiôto. Here the princes summoned to the conference also remained, with the exception of Yamanouchi Yôdô, the Daimiô of Tosa, who had been compelled by illness to return to his home, Kôchi in Tosa. In the autumn of the same year, 1867, he sent however a remarkable letter to the Shôgun, to the following effect.

"It appears to me that although since the Middle Ages the government and executive have been carried on by the military classes, we have nevertheless, since the arrival of the foreigners, constantly been contending with each other. The east and west have risen in arms against each other, civil war has never ceased, and the consequence was that we drew upon ourselves the insults

¹ He was born on the 3rd November, 1850, and was therefore only sixteen and a half years old when he ascended the throne. The year following he married Haruko, the noble and illustrious daughter of Ichijô Tadaka, a Kuge of high rank.

of foreign nations. The cause of this is, that the administration proceeds from two centres, whereby the eyes and ears of the empire are turned in two different directions. The course of events has brought forth a great revolution, and the old system can no longer be obstinately pursued. Your Highness should give back the supreme power into the hands of the sovereign, and so lay the foundation upon which Japan can take its place upon equal terms with other countries, enjoying the same rights as they do. This is an imperative duty at the present moment, and the deeply felt entreaty of Yôdô. Your Highness is wise enough to reflect upon this advice."

Two trusted vassals of the prince were commissioned to deliver this letter, and to advise the Shôgun also, on their part, to resign the supreme power.

The Shôgun was convinced of the reasonableness and expediency of these proposals, and drew up a document to his vassals to the following purport:

"As I consider the changes which have taken place in the political state of the government, it appears to me that when many hundred years ago the imperial authority began to decline, the family Fujiwara usurped the executive power. During the wars of Hôgen (Taira) and Heiji (Minamoto) it was transferred to the military classes. My ancestor was the recipient of special favour at the hands of the Mikado, and from that time his successors have enjoyed the same favour for more than 200 years. Although I occupy the office of my ancestors, the government and the criminal law have been in many ways badly administered, and the present state of things is the result. It appears to me that amidst the daily increase of foreign relations, the laws cannot be maintained unless the government is conducted by a single head; for this reason I am ready to give back the supreme power into the hands of the imperial court. This is the best that I can do at this moment for the welfare of the empire, and I call upon you all to make known to me your opinion as to the suitability of this proceeding."

Although none of the immediate vassals openly opposed it, this resolution excited great discontent among many of them. It could not however be prevented. On the 19th of November, 1867, the Shôgun sent a memorandum to the Mikado with his resignation. It was accepted in solemn form, but the Mikado sent to ask the Ex-Shôgun, or Tokugawa Naifu¹ as he was now often called, to continue for a time to conduct the administration, with the exception of the proceedings against the Daimiôs, which the court would take after hearing an assembly of them and the Prince of Kaga.

¹ Naifu, or Naidaijin, was the title which Shitotsubashi bore at court.

B. Abolition of the Shôgunate and restoration of the Mikado government.—The civil war in the year 1868.—The Mikado removes his residence and government to Yedo (Tôkiô).—Expedition against Yezo.

THE Daimiô of Aidzu and his troops, which were blindly devoted to him and the Tokugawa, had had for years the honourable task of discharging the duties of guards at the imperial palace, and had conscientiously executed it, especially on the occasion of the conflict with the Rônin from Chôshiu and the banishment of the seven Kuge. This, and the great influence which the Aidzu clan always exerted in Kiôto in favour of the Shôgun and Bakufu, had made it hateful to the Chôshiu-Samurai and many other southern clans. Now, therefore, when the south was daily gaining more influence over the court, was the time to make Aidzu feel their wrath. On the 3rd of January, 1868, the court suddenly issued an order whereby the watch at the castle gates was taken from the Aidzu clan and entrusted to the troops of Satsuma, Tosa, and Geishiu (Aki), to which were soon afterwards added those of Chôshiu. At the same time the banished Kuge were recalled and replaced in their offices. The Môri family of Chôshiu received also all the honours, titles and rights, of which it had been deprived on the banishment of the Kuge. The Shôgunate and Bakufu were abolished, and a new government established at Kiôto in its stead. The Aidzu-Samurai were deeply injured by these proceedings, and Tokugawa Naifu not less so, since they took him by surprise. He now regretted the advances he had made to the Mikado, collected around him the Aidzu clan and other devoted vassals for a consultation in Nijô (New Castle), in consequence of which he determined, in view of the altered position, which made it impossible for the Mikado to take his own course, and obliged him to carry out the instructions of Satsuma and his allies, not to submit without a struggle. He therefore left the town of Kiôto suddenly in the night of the 6th of January, at the head of his household troops, and accompanied by the Daimiôs of Aidzu and Kuwana, as well as his adviser Itakura, went to Ôzaka. Here an order from the court reached his companions, Aidzu and Kuwana, forbidding them to re-enter Kiôto.

At this time the representatives of the foreign powers were all assembled at Ôzaka. They paid their respects to the Uye-Sama¹ and delivered to him an address, in which they expressed their thanks for his efforts to observe the treaties, and asked him,

¹ The word Uye-Sama may be translated by Highness. After the Shôgun had fallen into disfavour at court, the hostile party were accustomed to call him neither Uye-Sama nor Naifu, but merely Keiki, *i.e.* by his old private name. He was called Shitotsubashi after the prince who had adopted him.

in view of the changes taking place, to name the government with which they must treat in future. His answer was to the effect that as long as the struggle for power was undecided, he was still constitutionally entitled to exercise the same rights as before; he only begged that they would maintain a position of neutrality. The foreign diplomatists had already resolved upon this; secretly, indeed, several had already entered into intimate relations with the now leading personages of the Mikado party, because they felt that it was certain of success.

The news of all these proceedings threw Yedo into great excitement. The town owed its existence and prosperity to the Tokugawa, and had already suffered much from the events of the last years, especially in 1862, in consequence of a decree procured by the Daimiô of Echizen, allowing the princes to take their families to their native fortresses. The result was that the palace-quarter was deserted, and many reduced to starvation. Rônin, who lived by surprising and robbing the richer citizens, especially at night, roved among the deserted Yashiki, and had become a public pest. A company of several hundreds of these desperate men dwelt in the Satsuma Yashiki, and a part of them at least belonged to that clan. Sakai, Daimiô of Shônai, to whose charge the public safety of the town was entrusted, at last surrounded the robbers' nest with his troops, and took the Rônin prisoners, whereupon the Yashiki broke into flames. The news of this event increased the enmity already existing in the Satsuma clan against the dependents of the Tokugawa. The latter hastened to put themselves in a state of defence.

The Naifu required of the Mikado the dismissal of all adherents of the Satsuma clan who had found places in the newly formed government, which however was not granted. On the other hand, the relations of the Tokugawa, the princes of Owari and Echizen, who had remained at Kiôto, endeavoured, but in vain, to bring about a reconciliation. By order of the Mikado they betook themselves to the Ex-Shôgun at Ôzaka, to invite him to come with a small train to court, where he should enjoy like honours with the princes of the Imperial House and the highest Kuge. The exceedingly unstable man promised to come, but afterwards allowed himself to be persuaded by Aidzu and Kuwana to go with them to Kiôto at the head of his army. Southern troops, in particular those of Satsuma and Chôshiu, were now ordered to bar the enemy's road, and on the 28th of January, an engagement took place at Fushimi, in which the rebels were defeated by the loyal (government) troops. This was the beginning of the bloody civil war, which, as the imperial power and government also depended upon it, is likewise called the War of the Restoration. On the retreat of the vanquished to Ôzaka, fresh conflicts arose in Yodo and Hashimoto, which, although the rebels were far superior in numbers, and defended themselves most

valiantly, turned out unfavourably for them, chiefly because several Fudai Daimiô, in view of the general position and doubtful right of their feudal lord, now went over to the troops of the Mikado. In Ozaka it was declared by the Naifu to the foreign representatives that he was at war with Satsuma. Here, being unable either to hold the castle, which soon burst into flames, or the town, or to protect the foreigners, who retired to Hiogo, he fled unrecognised to an American ship, and passed thence with his retinue to his corvette, *Kaiyô-maru*, which brought him to Yedo.

On the 7th of February a special ambassador of the Mikado came to the foreign representatives at Hiôgo, and delivered to them a letter, dated the 3rd of that month, wherein the Emperor announced to the princes of all foreign nations and their subjects that, in consequence of the resignation of the Shôgun, he had assumed and would henceforth exercise the supreme power, and also that he had established a special department for the management of foreign affairs. This letter, which was delivered in the most solemn manner, bore the signature Mutsuhito, and is remarkable as the first in which the personal name of a Mikado became public. On the 5th of February the court declared the Tokugawa Keiki and his adherents rebels, and all their rights and honours forfeited. A large army was at once put at its disposal to suppress them. The Mikado appointed his relative, the Prince Arisugawa (Arisugawa-no-miya), commander-in-chief, and delivered to him the emblems of his office—the brocaded banner and the sword of justice. The foreign diplomatists informed their countrymen of the impending struggle, during which the strictest neutrality was to be observed.

At the invitation of the government, two members of the English legation, Mr. E. Satow and Dr. Willis, went to Kiôto, where they were most cordially received. The Prince of Satsuma paid them a visit, and thanked Dr. Willis for his former services to the wounded, and his willingness to continue them. This visit is remarkable as the first paid to the old Mikado-town by foreigners since the beginning of the new relations. After the ambassadors had removed to Ôzaka, an invitation to Kiôto was sent them by the Mikado, which the representatives of England, France, and Holland soon afterwards accepted.

This did not, however, put an end to the hatred which many Samurai had long cherished toward the foreigners. It soon manifested itself in Kiôto by a murderous attack by two Samurai on the English embassy, and still more strikingly and somewhat earlier by the murder of an officer and ten sailors belonging to a French man-of-war, at Sakai, two miles east of Ôzaka, by Tosa troops. The French ambassador took down his flag and demanded—(1) The public execution of the criminals, and of the officers in command of them; (2) an indemnity of 150,000 dollars for the relatives of the victims; (3) an apology from the minister of foreign affairs in the name of the government; (4) an apology from

the Prince of Tosa ; (5) the exclusion of the Tosa troops from the treaty-ports. The government and the Prince of Tosa themselves lamenting the occurrence most keenly, readily agreed to these demands, and three days later had twenty murderers, two of them being officers, ready, in a temple at Sakai, to inflict upon themselves Seppuku before Japanese and French witnesses. After eleven of them had performed it, the lives of the rest were spared at the intercession of the French captain in command.

After the before-mentioned murderous attack in Kiôto, which took place as Sir Harry Parkes and his suite were passing through the streets of the town to pay his respects to the Mikado, a proclamation was issued at the wish of the English ambassador, in which the Mikado expressed his intention of observing the treaties, of remaining on friendly terms with foreign nations, and of punishing most severely every Samurai who should disregard his will and be guilty of hostile deeds against foreigners. About the same time the government renewed the old edict against Christianity : "The wicked sect, called Christian, is strictly prohibited. Suspected persons are to be denounced to the respective officials, and rewards (for the denunciation) distributed." All remonstrances on the part of the foreign representatives against this edict were unavailing ; the government could only be brought to a milder disposition, and to the omission of the expression, "wicked sect," objecting that the general dislike of Christianity and the fear of it were too great to allow them to act in opposition to public opinion. The year before, the Christian community at Urakami, near Nagasaki, had been discovered (see page 309). In June, 1868, the government commanded its 3,000 members to be sent into exile and distributed as labourers among thirty-four Daimiôs. Kido was sent to Nagasaki to superintend the execution of this command. The English consul there remonstrated, but could not prevent the sending of at least 120 of these harmless Christian peasants by ship to Kaga. Kido¹ expressed himself on this occasion against the missionaries ; and in accordance with the views at the time of the Christian persecutions under the first Tokugawa, declared them to be people sent to Japan to tempt the Japanese to disobey the laws.

In the spring of 1868 Ôkubo, the councillor, and afterwards influential minister, addressed the following memorandum to the Mikado :

"Although the troops of your Majesty have been victorious in the conflicts at Fushimi and Toba, yet the leader of the rebellion has escaped. The sentiments of the different clans are undecided, and our relations with foreign powers rest on no satisfactory basis.

¹ A relative of the Japanese ambassador, Aoki, in Berlin, and one of the principal Samurai of Chôshiu, much esteemed as a stainless patriot and an able statesman

Extraordinary measures are needful in a crisis. Since the Middle Ages our Emperor has lived behind a screen, and never set foot upon the ground. Nothing that has happened outside has ever reached his sacred ears; the imperial residence has been completely shut off, and naturally unlike the outside world. No one, except a few court nobles, might approach the throne—a practice quite opposed to divine principles. Although the first duty of man is to respect those set in authority over him, yet by exaggerating this respect he neglects his duty and causes a breach between the sovereign and his subjects, who are unable to bring their concerns before him. This pernicious practice has frequently occurred in all ages. Henceforth however let this pompous etiquette be forgotten, and simplicity be our first endeavour. Kiôto has an inconvenient position, and is unsuited for the seat of the government. Let your Majesty temporarily reside in Ôzaka, make this your capital, and so put an end to one of the abuses which we have inherited from old times. This seems to me an urgent matter, and I submissively beg your Majesty to resolve upon it without loss of time."

This memorandum, corresponding to the spirit which prevailed throughout the court, did not fail to have its effect. The Mikado betook himself temporarily to a small naval station at Ôzaka, and shortly after transferred his residence to Yedo.

Before however this could be done, it was necessary that the town should be in the possession of his troops. These were approaching along the Tôkaidô, Nakasendô, and Kôshiu-kaidô. Keiki, the Ex-Shôgun, once more repented his last actions and their consequences, admonished his vassals, though mostly in vain, to give up their resistance, and sent a high priest and relative of the Mikado, as well as the widows of his two predecessors, to Sumpu in Suruga, at that time the head-quarters of Arisugawa, to entreat pardon for him. The palace was in consequence given up to the imperial troops, which entered Yedo on the 26th of April. Keiki went into exile at Mito, later on at Sumpu. Most of his vassals in the Kuwantô, as well as the rich citizens, supported Aidzu, Itakura, and Ogasawara, who, with twenty-two other Daimiôs, and many Hatamoto had determined to continue the struggle, without troubling themselves about Keiki.¹ It was carried on by them with much skill and bravery, at the cost of still more blood and property, slowly passed farther and farther northwards, and finally came to an end at Yezo. Only a few of its incidents need be mentioned here.

On the surrender of the palace at Yedo, a number of Hatamoto

¹ Of the more powerful feudal lords of the north, only Akita and Tsugaru associated themselves with the imperialists from the beginning of the struggle. Others gradually changed sides, Aidzu, Shônai, and Nambu remained the most steadfast.

and Samurai, who called themselves Shôgitai (the Duty-Illustrating-Band), took possession of the park and the large temple of Tôyeizan at Uyeno, in the north of the town, where they seized upon Rinnôjino-Miya (a prince of the imperial family, who was a high priest) and made him anti-emperor. On the 4th of July, a conflict arose in Uyeno during which the Tôyeizan was burnt to its foundations. This was the most splendid of the temples of Yedo, being adorned with the most beautiful works of art. The Shôgitai succumbed and fled in part to Aidzu, whither they carried the Miya (imperial prince) with them.¹

The struggle for the possession of many fortified towns such as Yuki, Utsunomiya, Iwakitaira, Shirakawa, to the north of Yedo was an obstinate one, and met with varying success. Foremost on the side of the rebels in point of skill and imperturbable courage, stood Kondô Isami and Ôtori Keiske, yet they were unable to hold out against the greatly superior force. The former was taken prisoner,² the latter fled with the rest of his army, when Shirakawa had fallen, to Aidzu. From all sides heavy storms were closing round the mountain borders of this beautiful country, for Aidzu was now declared to be the root of the rebellion, which must, in the first instance, be cut away. In Echigo the important town of Nagaoka, after a brave defence by the garrison, was burnt, and Yonezawa, the ally on the northern frontier, no longer held its ground, but went over to the enemies. These now closed around, forcing their way over the mountain passes, where the posts were, after a short conflict, slain, into the Aidzu-taira, and marching upon Wakamatsu, the capital. This also became a prey to the flames. At length the castle, in the defence of which even the women took part, also fell. The Daimiô and his son were obliged to surrender at discretion (3rd of November, 1868). These bloody fights were followed by others in Nambu; after which the resistance in Hondo was subdued, and peace apparently restored. Several of the rebellious Daimiôs lost their possessions entirely or in part—none their lives. Hoshina, the Daimiô family

¹ This prince now bears the name Kita Shirakawa. At that time, although still young and inexperienced, he was, in accordance with an old law, high priest of the Tôyeizan, then for several months an anti-emperor, in the hands of the rebels, without will or power of his own. After their subjugation, he was pardoned, and sent by the court to Berlin, where he applied himself for three years to military studies. A betrothal, which the court did not approve, was the cause of his recall. In the year 1879 he helped to found the geographical society at Tôkiô, and became its president. As such he presided on the 23rd of September at the banquet which the Japanese, Germans, English, and American Scientific Societies gave in honour of Nordenskjöld and his companions, and welcomed the guests in an admirable speech in the German language.

² He was brought in a cage to Itabashi, near Yedo, where he was beheaded. His head was put in spirits and sent to Kiôto, where it was exposed in the dry bed of the Kamogawa near the fourth bridge. This most shameful of all punishments was inflicted upon Kondô Isami because, as chief adviser of his lord, the prince of Aidzu, he had made himself especially hateful to the southern clans.

of Aidzu, lost their beautiful principality, but afterwards received a small property in Mutsu of 30,000 koku, nominally that they might be in a position to continue the family offerings for their dead, but in reality because their feudal fidelity inspired much respect, and the government was ashamed to reduce them to beggary. Hoshina was the old family name, which they afterwards had changed for Matsudaira. The latter, a name of honour under the Tokugawa, was no longer used after the fall of this house.

Once again, contrary indeed to all expectation, conflicts arose between the adherents of the Tokugawa and the government troops. After the taking of Aidzu and Nambu, the implacable enemies of the victorious troops, and amongst them Ôtori Keiske, fled to Yezo. Their resistance found great support in Admiral Enomoto with the fleet of the Ex-Shôgun, consisting of eight ships, which left the bay of Yedo on the 4th of October for the island of Yezo. Hakodate and Matsumaye were quickly taken one after the other, and a kind of republic was established, but their defenders suffered much from cold and hunger, and surrendered on the 8th of June, 1869.

We must here make mention of a few other events which occurred between the pacification of the north of Hondo and the conflicts in Yezo. On the 6th of November, 1868, the chronological period was changed, and it was determined that henceforth only one such period, a Nengô, should be reckoned for the reign of a Mikado. Thus began the first year of Meiji¹ ("illustrious rule"). On the 26th of November, the Mikado removed his residence to Yedo, which from this time was called Tôkiô (according to another reading Tôkei), the Eastern capital, in distinction from Saikiô (Kiôto) the Western capital. He was soon afterwards acknowledged by the foreign Powers, and received their representatives on the 5th of January, 1869, after which he travelled overland to Kiôto, to make the prescribed ancestral sacrifices, and to be married. On the return journey several thousand Shimpei (voluntary bodyguards) entered his train as followers; they were men of different clans, and had only been attracted to each other by their common hatred of the foreigners. At Tôkiô they were made to join the army. Soon after an imperial councillor was murdered at Tôkiô, on his way to the palace, because he was suspected "of professing wicked opinions," *i.e.* of inclining to Christianity. The Rônin, who committed the deed, were afterwards seized and punished for the sake of public example. Insults to foreigners and their representatives forced the government to issue a proclamation, whereby the old regulations concerning Damiô processions were revoked, and the

¹ With Meiji begins the new period. The 16th year of Meiji, in which Japan now is (1883), forms at the same time the sixteenth of its political reconstruction, under the single rule of the Mikado Mutsuhito, and in friendly intercourse with the Christian Powers.

cry "Shita-ni-iro" no longer permitted. But the extent to which people in general were still under the dominion of the old ideas appeared also in an assembly of noblemen, which took place soon afterwards, and in which the question, whether the carrying of swords should not be done away with, was negatived by all, and a proposal for the suppression of the Seppuku but feebly supported.

C. Abolition of the Feudal System.—Mediatisation of the Princes and Samurai, and other innovations.—Insurrections of the Samurai.—Expedition to Formosa.—The Satsuma Rebellion.

THE fall of the Shôgunate and the civil war were followed, in 1869, by the mediatisation of the Daimiôs, to which they in part submitted voluntarily, and were in part compelled by the force of circumstances.¹ Kido drew up the notable memorandum to the throne, signed by the leading princes of the south (though Tosa was its real originator), in which the Daimiôs declared that they were willing to resign their lordships into the hands of the Mikado, to whom, according to the divine law, they belonged. This step has frequently been represented in Europe as a conspicuously patriotic act; but when we examine more closely the circumstances which led to it, it loses much of its admirable character, and appears indeed to be no great sacrifice on the part of the feudal nobility. With a few distinguished exceptions, the nobles did not possess the intellect or the prestige to stem the current, but had grown up in indolence, luxury and fiction, and were for the most part weak in body and mind. The Daimiôs were in many cases children, and wholly in the hands of their chief active and ambitious officers, who acquired after the restoration much more influence and more lucrative positions. Moreover, the feelings, thoughts and actions of men in such extraordinary epochs, with their powerful external impulses, must not be measured by the standard of everyday life, nor must we in the present case overlook the fact, that we have to do with a people of a quite exceptional development, and with modes of thought and action in many respects quite strange to us. And it is just for this reason, together with the great difficulty presented by the language and reserved character of the Japanese, that most foreigners who come into contact with them fail to understand them.

The old rule, "to the victor belong the spoils," found its full application in the reconstruction of Japan. Not only were all the principal leaders and supporters of the victorious movement abun-

¹ The year before most of them were still without suspicion of any such movement. Many "hired" foreign instructors, mining engineers, physicians, teachers, etc., in order to bring their troops and possessions to a higher level of efficiency. Within this period, moreover, falls the part played by the German Sergeant Koepen with the Prince of Kiushiu at Wakayama. (See the Topographical Section).

dantly rewarded by the Mikado, but to the Samurai of Chôshiu, Geishiu, Satsuma, Hizen and Tosa fell also the lion's share of posts under the new government and administration.¹ Of course to the able and conscientious among them these posts were no sinecures ; for the general intoxication was but too soon succeeded by the sober reality, which made it clear that construction is more difficult and demands much more time, consideration and perseverance, than destruction. The latter had been carried on on a comprehensive scale, and was still being continued, though not with the same rapidity. It involved the loss not merely of worn-out institutions and prejudices, which loss was a gain to society, but also of many things which would have been well worth preserving, such as most of the Daimiôs' castles, as well as several temples with their valuable memorials of antiquity, and among them in particular products of artistic industry, which can never be replaced.

Upon the mediatisation of the Daimiôs in 1869, the central government at Tôkiô had begged the feudal lords to remain as governors, and to carry on the administration of their dominions with their previous official staff. It was not possible that this state of things should be permanent, and accordingly in the following year these princes with their families were summoned to Tôkiô, the old division was entirely abolished, and the country was broken up into ken, or governmental districts. In the northern ken, people from the south were put into the highest posts, while little change was made in the position of the great southern clans, and especially in that of Satsuma, which was for a long time treated very gently, until the great revolution of 1877, brought about another state of things here also.

Since the abolition of feudalism the Japanese population has been thus classified :

1. The Mikado, Tennô or Tenshi.
2. The Shin-nô, or Imperial Family.
3. The Kuwa-Zoku (pronounced Kadzoku), *i.e.* flower of the families, the nobility of Japan, consisting of the former Kuge and Daimiôs.
4. Shi-zoku, *i.e.* respectable families, the Samurai.
5. Hei-min, *i.e.* common people, in their three sub-divisions of peasants, artisans and traders.

The change affected the three great classes of society in very different ways. The common people, peaceable, industrious, contented, and long accustomed to heavy taxes and blind obedience, in the first place only changed their masters and soon found themselves on the whole happier under the new state of things than

¹ The new cabinet consisted of three Kuge (Sanjô, Iwakura, and Tokudaiji), and Nabeshima, the Ex-Daimiô of Hizen, who held ministerial offices, further of the former Samurai, now Sangi (councillors), Ôkubo of Satsuma, Soyeshima and Ôkuma of Hizen, Hirozawa and Kido of Chôshiu, Sasaki of Tosa, to whom were soon afterwards added Saigô, Itagaki, and various others.

before. The Daimiôs on giving up their possessions had stipulated that they should continue to receive a tenth of the revenues, and had thus sufficient to enable them to live with dignity, and indeed were better off than before, when they had had to provide for the support of their Samurai and Yashikis, for processions, presents, etc. The incomes of the Kuge were considerably increased. But the new position of the Samurai was in complete contrast to this. Their hereditary incomes had also been reduced to ten per cent. But this reduction was with most of them, who could not occupy official posts or find some other remunerative occupation, very bitterly felt. Many, to avoid starvation, confined themselves to a mere outhouse of their former Yashiki, and tried, by pulling down the rest, to find land on which to grow tea, mulberries or rice. Others would gladly have taken up the spade if only they had had tillable land at their disposal—or even the hitherto despised reckoning-machine (*Soro-ban*, the abacus) of the tradesman, if they had but possessed the necessary sum to begin, and the intelligence to carry on, a business. It was in their case that forbearance and equitable consideration were most called for, but the government exhibited in many ways a lack of these qualities. The abolition of the absolute power which was exercised by the ministry, and the introduction of a constitution with the co-operation of the nation, as the Mikado had solemnly promised at the outbreak of the war at Kiôto, were demanded. The government however believed that the people were not yet ripe to take such a part, and rejected as unpractical the memoranda which influential Samurai at different times submitted upon this point.

With the pensions for the nobility and Samurai the country had undertaken a great burden, which was soon very grievously felt. They swallowed up nearly one half of all the national revenues, and these being chiefly derived from taxes upon land, pressed especially upon the agriculturist; for even the effort to secure for the country the advantages of Western civilization, however praiseworthy in itself, cost a good deal of money. The task of the government presented great difficulties in every direction, which were frequently still further increased by inexperience and precipitancy. With blind impetuosity it hurried into all manner of costly innovations. Enormous sums were swallowed up in the maintenance of a useless army of officials, in irrational attempts to colonize Yezo, to promote mining, and in many other useless experiments, and in foreign advisers in these things. If experience and ripe judgment were lacking in the inauguration of many of these changes, there was a still greater lack of perseverance and of patient attention to their proper carrying out. Each new idea was taken up with childish delight and eagerness, and with childish inconstancy speedily thrown aside again with disgust.

The finances suffered more and more amid all these claims upon them. In order to relieve them gradually, recourse was had to

a so-called capitalization of the hereditary revenues of the nobility and Samurai, by the substitution of an indemnity for the life-rents, and then by giving bonds instead of paying the indemnity in cash. This was done without the consent of those affected, although it most vitally injured their interests. The government in this way, as well as by many other measures, increased the number of those who longed for the rice-pots of their feudal lords, and deplored the entire revolution, though it was partly their own work. Hatred, partly upon these, partly upon religious grounds, fell upon foreigners as well as upon those who allowed themselves to be influenced by them. Those Rônin, who, as the outcasts of their social class, were ready for any mischief, averse to labour and discontented, as soon as they felt the pangs of hunger, had so long joined with all religious fanatics in their hatred of foreigners and their cry "Jô-i," that they did not know what course to take in the new state of things. They had co-operated¹ to the best of their power in the abolition of the Shôgunate, and believed after the revolution that they had gained the object of their desires, when they suddenly perceived with astonishment and indignation that the government of the Mikado greatly surpassed the Bakufu in its inclination to the foreigners, and was beginning to follow foreign influence and foreign models in everything.

The disturbances and dangers which presented themselves to the new national life in the first decade of its development did not proceed from the defeated adherents of the former régime, but from such as had in the last Civil War played a prominent part among the supporters of the Mikado, and then, because their ambition and their expectations had not been satisfied, abandoned their former friends in the government to place themselves as leaders at the head of the discontented and rebellious in opposition to it. Before, however, noticing the more important insurrections thus brought about, we will first recall the most important of those other events which make the reign of the present Mikado so memorable. It is distinguished by innovations of all kinds and by a vigorous effort to introduce Western civilization. As early as 1870 Tôkiô was connected by telegraph with the increasingly flourishing port of Yokohama, and plans for the construction of a railway were approved of. These labours proceeded from Englishmen, who also erected light-houses and established a Mint at Ôzaka. Soon afterwards a school of navigation conducted by Englishmen was founded, as well as a sort of Polytechnic school. The French had already under the Shôgunate built an arsenal and a dockyard at Yokosuka not far from Yokohama, and had entered the service of the new government. As the result of a treaty with the Napoleonic government, French in-

¹ A Japanese newspaper afterwards said later of this co-operation: "It is as though the vermin in the prisons were to claim compensation for supporting the cause of justice by tormenting the poor prisoners."

structors came, after the termination of the great war in France, to Tôkiô to reorganise the army. In mining, in laying out a model-filature, and as advisers in the drawing up of new laws, Frenchmen were also actively engaged. It is only fair to acknowledge that most of them were men of ability, and that, so far as they could, they carried out in a laudable manner the work entrusted to them. The Japanese were anxious to learn the art of making canals from the Dutch, and colonization from the Americans. Germans were called in as teachers of a school of medicine, as well as to direct mining operations.

As early as 1871 the Samurai received permission to go about without swords. Many availed themselves of it. Henceforth the retention of the old dress and of the sword was the Shibboleth of the Samurai of the old stamp, while the imitation of European costume indicated the man of progress. In the first stage of this progress regard was had only to the extremities of the body; the razor no more exercised its functions on the head, for now the hair was worn in European fashion; boots and felt hats, as well as umbrellas, came into favour, and, "last, not least," petroleum lamps were used in the houses and in businesses.

More important and farther reaching was the deliverance of the Eta and Hinin from their position of contempt, and the abolition of the marriage limitations among the various classes of society. Leather became a more favoured article; Etas and others founded shoe-making establishments in the neighbourhood of the government buildings.

Even the Mikado was not left behind by the efforts in the cause of progress made by his government and the more sagacious among his people. On the 2nd of October, 1871, he showed himself to them for the first time in an open carriage, drawn by four horses, in which he drove to the Hamagoten (Seaside Palace) on the south side of Tôkiô. In the following year he visited the arsenal at Yokosoka, the Mint at Ôzaka, made a cruise in a war-steamer to the southern provinces, and finally returned from Yokohama to Tôkiô by the railway. He soon repeatedly appeared in public, in a kind of uniform of good European fashion, in a carriage, as well as on horseback, and was respectfully, but not cringingly, greeted by his people. The "Shita-ni-iro" (prostration) was over. Even the Empress reconciled herself wonderfully and with great dignity to the new state of things. She received, in 1873, for the first time, the ladies of the foreign ambassadors most affably, and began to take especial interest in the neglected education of the female sex.

As early as 1870 newspapers made their appearance, and were much read. In many instances they prepared public opinion for very important innovations, which in consequence could be brought about without disturbance. Among these may be especially mentioned the substitution of the Gregorian Calendar for the old Chinese reckoning of the year, which was effected in 1873.

In this period, also, the first great embassy of the Mikado to America and to the European courts was sent, under the conduct of Iwakura, one of the leading statesmen of Japan. Besides him, the ministers and councillors, Terashima, Kido, Ôkubo, Itô, Yamaguchi, and many other Japanese took part in it. Iwakura's diplomatic object, to induce the Treaty Powers to give up their jurisdiction over their subjects living in Japan, was not attained; but these influential Japanese, from their landing in San Francisco on the 15th of January, 1872, till their visit to the Vienna Exhibition in the summer of the following year, had abundant opportunities of daily increasing their desire for education and their keen interest in Western civilisation.

To the events here briefly mentioned, and many others which indicate the mighty revolution in Japan, we must add a few more of great importance, belonging to the year 1876, viz. the revocation of the edict against Christianity, the adoption of Sunday as an official holiday, and the prohibition against wearing swords. In their attitude towards Christianity the government long adhered to the old idea,—that it was politically dangerous, that it excited disturbances and contempt for the Mikado, and therefore could not be tolerated. Accordingly in January, 1870, it carried on the persecution of the poor harmless peasants of Urakami, and sent them by ship, in spite of the remonstrances of Sir Harry Parkes, the English minister, who happened just then to be in Nagasaki, to different provinces, but chiefly to Kaga. Here they had to live an inactive life in separate buildings, with poor food, and to some extent rough treatment, the women separated from their husbands, the children removed from their parents, until at length milder views with regard to them asserted themselves, and in 1873 their return to their homes took place. In the year 1871 a pamphlet, which was widely read, appeared in favour of Christianity. The schools, which missionaries opened in Yokohama, Nagasaki, and other treaty-ports, were well attended, particularly by young Samurai, if only for the purpose of learning English or French and other things necessary for success. At last, too, the old notice-boards, with their proclamations against the "evil sect," disappeared, so that as early as 1873 no one was prevented from reading Christian books, from taking part in divine worship in the foreign quarters, and making open confession of the gospel. Finally, in 1876, all the former edicts and admonitions against Christianity were recalled.

The introduction of the Christian Sunday as a holiday for the officials—the common people had no regular holidays except at New Year—was due merely to external practical motives. Hitherto the custom had been that every fifth day reckoning from the first day of the month, *i.e.* the 1st, 6th, 11th, 16th, 21st, 26th, of the month, was an official holiday, which was called *Ichî-roku* (first—sixth). The many foreigners, especially Englishmen and

Americans, who entered the Japanese service, insisted upon their Sunday ; on *ichi-roku* days they could not, on Sundays they would not, work. This gave rise to much inconvenience, which was done away with by the adoption, on the 1st of April, 1876, of Sunday as a day of rest. Three days previously the following proclamation had appeared :

"No person may henceforth wear a sword, except in court dress, unless he be a member of the army, navy, or police."

The prohibition of swords was received by foreigners with pleasure ; by those whom it affected, partly with indifference partly with indignation. In *Tôkiô* and the treaty-ports the practice had already almost entirely disappeared. There the apparition of a body of two-sworded Satsuma people might, even in the years 1874 and 1875, excite a slight shudder in many a European at the remembrance of the crafty blows dealt by these keen-edged weapons. In the more distant provinces and towns people in many cases clung the more firmly to this privilege of feudal times because others had already disappeared. In Kanazawa *e.g.*, the writer in 1874 saw all the officials going to their offices with their swords, and in Akita a few months later, shortly after the assassination of Consul Haber, did not see a single Samurai who was not in the old costume. In Satsuma in 1875, even school-boys when they went out, still carried one sword, in accordance with the old privilege and custom.

Dissatisfaction with the new state of things, since the abolition of the feudal system, became more and more conspicuous among the former supporters of the revolution, the Samurai of Satsuma, Hizen, Chôshiu, Tosa and other provinces, and finally found expression in a series of risings of which the most important must be briefly mentioned here. To begin with, there prevailed in 1875, in southern Japan, a very warlike spirit against Corea and a great inclination to repeat the expedition under Taikô-sama, although their neighbours had done nothing whatever to provoke it. Even in the imperial council this idea found warm advocates and promoters, especially in General Saigô. It was one of the first tasks of the Vice-president Iwakura, on his return from Europe, as well as of his colleague Ôkubo, prudent and cautious men, who were not anxious to plunge their country into costly adventures, to struggle energetically against this current. The result of their influence was the retirement of Saigô and of several other members of the council,¹ as also a murderous attack upon Iwakura ; and in the sequel the risings in Saga and in Satsuma were also connected with it.

The rising of Saga in Hizen was excited and conducted by the ex-councillor Yeto, brother of Soyeshima, the former Minister of

¹ Gotô, Soyeshima, Eto (Yeto), Itagaki, Yuri, who shortly afterwards presented a memorial in which they urged the need of popular representation.

Foreign Affairs. War with Corea, the restoration of the Daimiô-lordships, and the expulsion of foreigners, were the demands of the insurgents, for whose subjection only ten days were required, as the government had the telegraph, steamers and a disciplined army at its disposal, and the other malcontents hesitated for various reasons to share in the insurrection. Forty places were nevertheless destroyed by fire in this rebellion; and five hundred men, rebels and soldiers, also lost their lives.

The government learnt from this event, and many similar occurrences, that they must do something to divert the thoughts of the inactive, discontented and ambitious Samurai from domestic affairs to a foreign sphere. They accordingly determined, in concert with the reactionary Shimadzu Saburô, upon an expedition to Formosa, ostensibly to punish the savage races in the north-east of this island for their repeated murders of shipwrecked sailors from Japan and the Riu-kiu Islands, but probably with an *arrière pensée* of annexing their territory and, if possible, the whole island. In May, 1874, the expedition of 3,000 men, under the command of General Saigô Yorimichi, younger brother of Saigô Kichinosuke, sailed from Nagasaki and speedily defeated the savage aborigines of north-western Formosa in several engagements. Now however the Chinese, goaded on by Europeans, bestirred themselves, claimed a sovereign right over the whole island, and threatened war against Japan unless she retired. In consequence of this change of attitude on the part of China, Ôkubo proceeded to the court of Peking and concluded an honourable peace, obtaining a money indemnity for the expenses incurred by Japan, though it was far indeed from being equal to their large amount. In the following year, Enomoto, the Japanese ambassador in Petersburg, succeeded in concluding a treaty between Japan and Russia with reference to the island of Saghalien or Karafto, the possession of which had long been the subject of diplomatic controversies. The titles of the two powers to this island were of equal value, the Russians having gradually advanced from the north and the Japanese from the south, principally for the sake of the fisheries. Japan at length exchanged its share for eighteen uninhabited and untillable Kuriles, hitherto reckoned as belonging to Russia, and valuable only for their fishery, and thus extended its boundaries to Cape Lopatka. In 1876 the Japanese ambassador, Kuroda, concluded a treaty of friendship and commerce with Corea, as a result of which first Fusan, and then in May of this year Gensan, were opened to Japanese trade. The year 1876 produced two fresh insurrections in Kumamoto and Chôshiu. In the former place an old Samurai aged seventy years stood at the head of the conspirators, who clung strenuously to old ideas and customs, and were filled with deadly hatred of foreigners and their Japanese favourers. "Sakoku Joi" (close the country, drive out the foreigners) was the cry, which distinguished them. Their

declaration is characteristic. "An eagle will never become a seed-eater, but will rather die of hunger; so also a Samurai of honour will never give himself up to trade or any such occupation; nor to other things which are contrary to his nature. But diabolical spirits now rule in this country of the gods, and are intending to do away with customs which are dear to us and have been observed by us from antiquity. This fact causes us great grief. Some time ago we were stripped of our precious swords, and now we are commanded to cut off the top-knot from our heads and to wear our hair in foreign fashion. Under these circumstances only one course is left to us, viz. to use our swords in the houses of the officials who imitate the foreigners. This course is alone worthy of men of our class." And in accordance with this view they acted. Some hundreds of these Samurai, armed and attired in the old-warrior fashion, fell one night upon the officers of the garrison in their quarters and the soldiers in their barracks (in the old castle square at Kumamoto), and massacred and burnt down everything. Those who did not fall in the conflict, and could not escape, committed the Seppuku.

At the head of the almost simultaneous outbreak in Chôshiu stood Mayebara, who had been a brave leader in the civil war, and afterwards an incompetent official, and had accordingly been dismissed with a pension. In his proclamation he promised "to deliver the Mikado from the bondage of bad advisers, from men who neither understand nor care for the honour and interests of the people, but allow foreign barbarians to carry away the treasures of the country." An end was soon put to his doings also.

The rebellion of Satsuma in 1877 took quite another shape; it was the greatest crisis which modern Japan has experienced, and called for the exertion of all its energies, not being mastered till after seven months. Its author and leader was no less a personage than general Saigô Kichinosuke, the man who by his prudent counsel (he was chief of the general staff of Arisugawa) and courageous arm had chiefly contributed to enable the Mikado to recover his secular power, and had received for this service rich recompense and the highest honours. His prestige after the restoration was second only to that of the Mikado, and it was no exaggeration when a Japanese newspaper one day declared that 50,000 Samurai were ready to lay down their lives at his bidding.¹

In 1873 Saigô had sulkily withdrawn from the government to his home in Kagoshima, and had curtly rejected all subsequent

¹ Much of this influence Saigô undoubtedly owed to his imposing figure, for he was a full head taller than the ordinary Japanese. Baron Hübner, who made his acquaintance in Tôkio, says of him: "Saigô is a Hercules. His eyes indicate intellect, his features energy. He has a warlike demeanour and the manners of a country noble. His dress appeared to me to be more than negligent. This now so influential personage finds it tedious at court and suffers from home-sickness."

efforts to induce him to re-enter the government. His friends and immediate neighbours, Generals Kinrio, Shinowara, and others, had soon followed his example. Before very long they established in Satsuma so-called private schools for Samurai, in which they devoted an hour every day to Chinese studies, but occupied the remainder of the time in military exercises. They were men who subjected themselves to rigid discipline, and had to undertake to conform to it at the peril of their lives. The number of these so-called private scholars increased to upwards of 30,000, and formed a respectable army, over which Saigô and his friends had complete control. It was a power which guided even Ôyama, the governor, and had all the posts of the administration in its power, and upon which the central government at Tôkiô had no influence at all. As early as 1875 the Press called attention to this state of things, and asked how the government could allow it. Particularly noteworthy was an article in the *Akebono-Shimbun* (the *Morning News*) of 20th July, 1876, which ran as follows:—

“Among the discontented Samurai, who are upon the alert to excite disturbance, are certain conspicuous persons in Satsuma and Chôshiu; in the former General Saigô and Lieutenant-General Kinrio. These two men, who occupy high posts in the army, are the leaders of these Samurai, and their military schools are more powerful than even Governor Ôyama; for he consults them before he undertakes anything himself. These are, in fact, the men of whom it may be assumed that they threaten the peace of the nation. They are essentially different from the newspapers, which have neither swords nor guns [but were at that time a good deal controlled] . . . The Satsuma Samurai act like an independent nation. It may be reasonable to restrain newspapers when they disturb the public peace, but it is dangerous to leave unchecked the power of those whom we have named; and we accordingly hope that the government will consider the question of internal peace on all sides, and will at the same time bestow their attention upon these Samurai.”

In another newspaper of 30th September, 1876, we find:—

“The people of Kagoshima are buying up arms for some unknown object. No one between fifteen and fifty years of age is allowed to leave Satsuma-Ken without the governor's permission.”

At length, at the end of January, 1877, the long-prepared rebellion broke out. Saigô, Kinrio, Shinowara, Beppu, Hemmi, and other well-known persons appeared as its leaders, and at the head of 14,000 well-armed insurgents, soon crossed the border of Higo on the way to Kumamoto. The supreme command was in the hands of Saigô. He, whose statesmanship and valour had brought about the restoration, whom the people had hitherto regarded as the ideal not merely of bravery, but also of unselfishness and loyalty, appeared as the leader of the bravest Samurai of Japan, skilled in warfare, well-armed, and blindly devoted to him,—as the

foe of the imperial army, in which he himself had held the highest rank, and whose marshal's uniform he had not long before worn. This was no contemptible opponent, nor was this a rebellion, like former ones, begun without a plan by some hundreds of excited people, and speedily suppressed. Now was the time for the government to rouse itself, to send its army of police and its best soldiers, as many as it could collect, to the south, and, above all, to employ all its skill and all its influential adherents in other parts of the country, that the firebrand might not be carried farther over the other large islands and a general conflagration ensue, for which there was everywhere fuel enough!

Saigô was fully conscious that in taking this step he was risking all the honours he had formerly won, as well as his life and the fortunes of his family; but he underrated the difficulties which stood in his way, and believed that he had now, as ten years ago, only to give the signal in order to excite a universal rising.¹ His object was to march to Tôkiô, to overthrow the government, and to procure for Satsuma such an influence with the Mikado as the Tokugawa had formerly possessed. His long preparations for this purpose were not yet finished; but the impatience of his people and friends carried him into the torrent before he had himself intended. Shimadzu Saburo had no share in the movement, however much he might have welcomed it in his heart, for his reactionary views grew with advancing age.

Ôyama, the governor of Satsuma, the weak-minded tool of the conspirators, had, soon after the outbreak of the rebellion, been invited by an imperial envoy, who appeared before Kagoshima, to come on board his ship and was then carried away as a prisoner. He was put upon his trial at Nagasaki. He confessed that he had by various acts essentially assisted the conspiracy, and sealed the confession according to the custom of the country with his blood and thumbnail. He was beheaded at Nagasaki on the 30th September, 1877.

Saigô had marched unhindered with his army, which was increased by accessions, as far as Kumamoto, where the garrison of the castle—three thousand strong—offered him the first serious check. While one portion of his army besieged the castle, 9,000 men marched farther northward, until in the north of Higo the way was stopped by the imperial troops advancing from Kokura. Arisugawa-no-miya again bore the brocaded banner and imperial sword. On the 20th of March the rebels were defeated in the san-

¹ In this he was mistaken, as most of the Samurai belonging to the neighbouring clans were not inclined to risk their lives for the haughty Satsuma, which had always claimed a position of its own, and Satsuma found no sympathy whatever among the former vassals of the Tokugawa. Even Toza, which was in many respects like-minded, did not carry out the promise of co-operation which had in some cases been made, because Itagaki exerted his whole influence to lessen the discontent, and to give it a vent in petitions of grievances.

guinary engagement of Tawarazaka, between Takase and Uyeki, and Shinowara was slain. The siege of Kumamoto had to be raised, the war was carried on through Yatsushiro and Hitoyoshi to Hiuga on the east side of Kiushiu. After numerous smaller conflicts, which we pass over, the well-fortified town of Miyakonojô fell, on the 24th of July, into the hands of the Imperialists. The theatre of war again shifted northward, and at length hot conflict was waged for the possession of the old fortified town of Nobeoka, the last stronghold of the rebels, which fell on the 14th of August. Upwards of 8,000 of the insurgents, among them nearly 3,000 wounded, surrendered; but Saigô and his friends, with about 500 men who would not leave him, despite his entreaties, fought their way through and escaped. On the 1st of September they again appeared in Kagoshima, to the utmost astonishment of the newly-established government, who rapidly fled to the harbour. A great quantity of stores now fell into their hands, but they had no heart to rejoice over them, for they all felt that the game was all but played out. Seven months before, Saigô had marched forth with 14,000 men; he now returned with 500. Then he had been confident of success, now he was destitute of hope; for already the enemy was approaching in force, and nowhere did any prospect of deliverance present itself. Saigô, with his faithful followers, took up a position on Shira-yama, a hill near Kagoshima, where he was surrounded on every side by nearly 15,000 government troops. On the 24th of September the attack took place. The resistance soon proved a failure, and the last remnants of the insurgents were slain or taken prisoners. On the following day the dead were collected for identification and burial. Kinrio was found covered with wounds, and also Beppu, Hemmi, and Murata. Near Kinrio lay the trunk of a tall man with a bullet wound and a swordthrust in his body, in the dress of a labourer, though the clear skin at once revealed the Samurai. Was this Saigô? A partly mutilated head was soon found and fitted to the trunk, so as to leave no doubt as to the identity. Eye-witnesses reported that when the brave leader was wounded, Beppu, in accordance with old custom, had performed the last office of friendship by striking off and mutilating his head, and then committed Harakiri.

Admiral Kawamura, the commander of the Imperialists, and himself a Satsuma-Samurai, washed the head of his former friend as a sign of respect for his bravery. The fallen rebels found a common grave near a temple in Kagoshima, while Saigô, Kinrio, Beppu, Murata and Hemmi, their leaders, were laid each in a separate coffin and buried near their followers.

Sympathy with the tragic end of Saigô was universal, and extended even to foreigners. On all sides he was admitted to have possessed the virtues of a hero; for Saigô was fearless in danger, constant in misfortunes, of creative genius in respect of resources, and when his inevitable end approached, he met it courageously.

Of selfishness he knew nothing; he treated even his opponents gently, and would not suffer the man of peace to be oppressed or robbed of his goods. At the time of the restoration he was called the heart and sword of the Mikado's cause, while his friend Kido was regarded as its head and pen. The country lost them both in the same year. But while Kido died in May, at Kiôto, upon his sick bed, was greatly honoured even in death and left a spotless name behind him; Saigô followed after a phantom and perished as a rebel.

The 42,500 persons who were charged with participation in the rebellion were leniently treated, 39,632 being left unpunished, and only 20 of the remainder being condemned to death, a leniency in accordance with the universal wish. In the overthrow of the insurrection not less than 65,000 men, troops and police, had been engaged, with a loss of 6,400 killed and 10,500 wounded. The rebels put in array 40,000 armed men, of whom 7,000 were slain and 11,000 wounded. Besides these great losses, the numerous places reduced to ashes, the fields laid waste, and the sacrifices of money made by the insurgents, the insurrection cost the government, according to official reports, the sum of 42 million yen, or £8,800,000, so that in a financial aspect its consequences will probably continue to be very long felt. After this outbreak the government did not hesitate to deprive Satsuma of its special privileges, and to attach it more firmly to the empire. It may rest tolerably sure that no repetition of this rebellion will be attempted, and may regard it as the last quiver of departed Feudalism. This great event was not however without after-pangs of various kinds. Among these were a mutiny in the artillery barracks in Tôkio, whose inhabitants felt themselves injured because they were not sufficiently distinguished; the cholera of 1879, which carried off a hundred thousand people; and the assassination of Ôkubo on the 14th of May, 1878. This talented and deserving Minister of the Interior was regarded as one of the chief opponents of liberal reform, for which he thought that the people were not yet ripe, and of Saigô, for whose fate so much sympathy was felt. By very many he was suspected, probably without justice, of having before the outbreak of the great rebellion sent police agents to Satsuma, and recommended to them the assassination of Saigô and his friends, by which means the latter had been first driven into insurrection. On his journey to the Imperial palace on the day in question, as the carriage was passing along an unfrequented road, six Samurai disguised as peasants leapt out from a bamboo-thicket and struck down Ôkubo and his coachman. The assassins, who came from the province of Kaga, then proceeded to the nearest police station and gave themselves up. On the same day two Japanese newspapers in Tôkio received copies of a document addressed to the Mikado, which the leader of the band bore upon his person with the superscription: "History of the assassination

of a traitor." In this they alleged as their principal motive, a desire to avenge the death of Saigô upon his greatest opponent, and at the same time repeated all the charges of the Tosa Samurai against the existing government, of which we shall speak in greater detail in what follows.

D. Contemporary Japan : Its Government, Efforts after Civilisation, and Relations to Foreigners.

The new epoch upon which Japan entered with the fall of the feudal system, may be described as the era of its Enlightenment, as with it the Japanese people attained to intellectual independence and self-reliance, and gave expression to them in all departments, but particularly through the press. Little as a return to the old system and its seclusion seems possible, the growing popular consciousness is just as little inclined to resign itself blindly to any other absolute power. Japanese returning home from the West have, like the many foreign books and translations of them, brought into the country a mass of new ideas, increased by those which have been introduced by foreigners staying in Japan, with the result that almost all the important questions of political life are most eagerly discussed, particularly on the part of the Samurai. The people have for years been demanding a control of the government and a share in the legislation intended for them, and have often and in various ways given expression to this demand. During the Satsuma rebellion, for example, the three political parties into which the Samurai of Tosa were divided, addressed to the throne memorials upon the political situation and the causes of their discontent. The long memorandum of the Rishisha (just society), to which Itagaki also belonged at that time, made a great impression, and found much favour even among foreigners, on account of its frankness and logical keenness, combined with the moderate and respectful language in which it was couched. The grievances referred to the following seven points:—

1. That the advisers of the crown had hitherto hindered the Mikado from performing the solemn promise of constitutional reforms and of legislative bodies for the discussion of national affairs, which he gave upon taking up the government ; 2, That the government had deeply hurt the Samurai by inconsiderate treatment ; 3, Had not fairly adjusted the poll-tax ; 4, Had not troubled itself about the necessary reform of the land-tax ; 5, That the financial administration was in a wretched condition ; 6, That the treaties with foreign powers required reform ; 7, That in matters relating to Corea, Formosa, and Saghalien, the government had not preserved the honour of the country.

As to the last two points, the reproaches which have also been made from other quarters against the leading Japanese statesmen, were not justified, and arose from a want of acquaintance with the

circumstances, and from a great over-estimate of the power and resources of the country; but in other respects the document told the government many a bitter truth, and might well be regarded as an expression of the prevalent feeling of the country.

None of the insurrections mentioned was directed against the person of the Mikado, whose prestige as Tennô demanded unconditional blind obedience and was disputed by no one. But this obedience was frequently denied when it was believed that it was demanded, not to the free will of the lord of the land, but to the ruinous influence of corrupt, and selfish councillors. Japan is ruled not by the absolute will of the Mikado, but by an oligarchy, consisting of a number of more or less talented men, who planned and conducted the great revolution, and since the fall of the Shogunate, have guided the ship of state on the whole with skill and good fortune past many a dangerous rock. The system which they chose is essentially that which prevailed in Japan before the development of Feudalism, and is anything but a model. An all-powerful irresponsible bureaucracy in fact dominates the country. It is separated into three grades with fifteen different ranks, viz. The Choku-nin (1st-3rd rank), the So-nin (4th-7th rank), and the Han-nin (8th-15th rank).

The Dai-jô-kuan (great council of state), which was established as early as 786 A.D. upon a Chinese model, and consists of three ministers of state (Dai-jin, *i.e.* great persons) and the councillors of state (Sagi), is the supreme legislative and administrative authority, at whose sittings the Mikado is present, and which rules the governmental districts (Ken) by governors (Rei or Ken-Rei). The presidents of the three Fu (chief towns) bear the title of Chiji. To the Dai-jin belong: 1, The Daijô-Daijin (great minister of the great government) or Minister-president, a post which since the restoration has been held by the former Kuge Sanjo Saneyoshi; 2, The Sa-Daijin (left-hand great minister), an office which was for some time entrusted to Shimadzu Saburô, but otherwise left unfilled; 3, The U-Daijin (right-hand great minister). The occupier of this post and the soul of the government is Iwakura Tomomi, already so frequently mentioned. The ten departmental ministers (Kio) must be Sagi; they have a Tayu (senior vice-minister) one or more Shoyu (junior vice-ministers) and a whole army of minor officials at their side. The ten departments of the government are:—

1. Guwaimusho (pronounced Gaimuscho), the Foreign Office.
2. Naimushô, the Ministry of the Interior.
3. Ôkurashô, the Ministry of Finance.
4. Rikugunshô, the Ministry of War.
5. Kaigunshô, the Ministry of Marine.
6. Mombushô, the Ministry of Education.
7. Kiyôbushô, the Ministry of Worship (now abolished).

8. Kôbushô, the Ministry of Public Works.
9. Shihoshô, the Ministry of Justice.
10. Kunaishô, the Ministry of the Imperial Household.

To these must be added further the Colonial Office, called Kaitakushi, for Yezo (now abolished) and the Kuriles.

After the abolition of the feudal lordships the country was divided into 3 Fu (chief towns), 72 Ken (governmental districts), the colony of Yezo inclusive of the Kuriles, and a Han (Clan), the Riukiu Islands. In 1876 a reduction of these 72 Ken to 35 took place, and the Riukiu-han was transformed into a 36th Ken. (For further details see p. 12.) The conduct of the Ken is in the hands of an official of the 4th rank, called Ken-rei (governor), with the Sanji (secretary).

When the new government, after the abolition of the Shôgunate, to the surprise of many not merely confirmed the treaties with foreign governments concluded by the Bakufu, but exerted itself to introduce Western civilisation into nearly every department, with the exception of the religious, the place of the old dull but respectable official class of the Bakufu was in many cases taken by a new race, the young creatures of the leading personages, who, especially if they had a tinge of foreign culture, a broken utterance of some European language, and attempted to dress themselves in the foreign fashion, had the best prospect of passing into profitable posts, over the heads of experienced men, who had grown gray in office. An entirely different tone and spirit found its way into the bureaus; a brusque nonchalance, into which half-cultured people are so easily led by exaggerated self-esteem. How ridiculous "Western civilization" appeared when assumed or, to put it better, aped by such immature youths! What European, who has lived in Tôkio, does not remember the Sanganichi (the three first days of the new year, devoted to official greetings), and the costume in which many of these young officials paid their respects to their superiors? Could a more unsuitable gala-dress be conceived for them than our evening dress? Only imagine the well-wisher in imported, down-trodden, machine-made boots, too large for his feet, with black trousers in which the cloth had been economized, dress-coat, chimney-pot hat, gloves with room for his hands to grow, a brightly coloured vest, cutting connection with the trousers, and added to all a cotton towel with a red striped border, to protect the neck against the cold air! Many a ludicrous regulation was issued in the provinces. Thus a prefect of my acquaintance ordered the male population in his large Ken to adopt the certainly convenient European fashion of wearing the hair, and bade the burgomasters and the police to arm themselves with scissors and take care that no top-knot was seen.

The civil war had, as we have already observed, brought about a surprising change in the attitude of the government towards

foreigners. The Ban-i (foreign barbarian) of yesterday was the Ijin-san (foreign gentleman) of to-day, and in the mode of address even a sen-sei (worthy scholar).¹ "Blue eyes and red hair (*i.e.* foreigner) were never in such esteem with us as now," said a friendly old Samurai to me, in 1874, when I expressed to him my surprise that an elderly German barber from New York had been appointed Surgeon-General of the expedition to Formosa with a salary of 500 dollars a month.

When, however, we consider the novelty and the enormous difficulties of the circumstances, it becomes us to judge these and similar phenomena gently, and not to place our demands too high, nor forget that the government had in its various failures been misled by the foreign advisers in whom it had placed its confidence.

Erroneous ideas of the wealth and natural resources of the Japanese empire, such as were first entertained and propagated by Marco Polo, and were afterwards further disseminated by the accounts of the Portuguese and Dutch, produced, in combination with the political revolutions, a feverish speculation with regard to Japan. In the treaty ports, at Yokohama, (Kanagawa), Nagasaki, Kobe (Hiogo), Ōzaka, Tōkio, Niigata and Hakodate, an extremely miscellaneous society from almost every country of the Christian West was gathered for the purpose of reaping these actual or imaginary benefits. Side by side with talented, estimable and truly industrious men, were found here, as in every newly opened country, adventurers of every kind,—people who materially could only gain and morally had nothing to lose. In their ways of recommending themselves to the natives, and particularly to the government, they varied greatly, and only agreed in their aim of helping to drain the country. Some of them believed that they would soonest attain their end by attempting a ludicrous imitation, as quickly as possible, of the customs of the country, in dress, mode of life and other externals, in which respect an American consul in particular was very successful. Others hoped to impose upon people by giving free course to their natural rudeness, and showing as little pliability and consideration as possible. Others again observed the golden mean, or, more prudent than the rest, sought to flatter to the utmost the national vanity, and then in common with corruptible officials, of which the modern government is said to have no lack, to pluck the feathers from the golden goose. That several American apostles of progress should have tried their fortune in this direction with much success, need not surprise us, considering the school of "Smartness" which so many go through across the ocean.

¹ This honourable title was in fact formerly bestowed upon several waiters and artisans, when they "let themselves" to the Japanese, in order, as "professors," to assist in introducing European civilization.

The civilisation of a people is no hothouse plant, but may be compared to a tree developing in the open air, which in a favourable soil and with sufficient care, grows from a weak germ into a vigorous plant, strikes root deeply, resists many a storm, affords cool shade and brings forth fruit abundantly. True civilisation consists not merely in agreeable external forms of intercourse, such as we find in social life, but is the expression of a nation's entire state of culture, of which the highest products are education in general, legal consciousness expressing itself in good laws, the development of the arts, and a literature sustained by a lofty spirit. Such a civilisation has always a religious basis, and we therefore speak of a Christian, a heathen civilisation, etc. It is moreover not a fixed invariable quantity, but stands according to its basis at very different stages of development. The old Japanese civilization, *e.g.* which was developed on the foundation of Chinese philosophy and Buddhism, led the way to considerable advances in social forms, in arts and certain other matters, but not in moral or legal development. When the religious basis is wanting, ideal and moral aims are also absent, and civilisation becomes a caricature and an illusion. Epicureanism, for example, which seeks to acquire only for the purpose of enjoying, whose guiding motive is not the consciousness of right but naked selfishness, and which equally undervalues divine and human law, has no part or lot in true civilisation, however civilised may be the forms in which it makes its appearance. Hence Buddhism had so formative an influence upon its professors, because it held before them a lofty ideal, which they could only attain by continuous moral effort.

Our European civilisation is the product of a development carried on by endless labours and struggles during many centuries upon the sound moral basis of Christianity. In Japan, however, it was proposed to secure these achievements of the Christian West without understanding and adopting their foundation. Young Japan was of opinion that there was no better way of attaining the goal than by taking, as it were, a bird's-eye view of Europe and America, and skimming off the cream wherever it was found. Unfortunately, there were plenty of advisers who, for the sake of filling their own pockets, encouraged this delusion.

The first impulse to the modern efforts of Japan after civilisation proceeded from inward necessity—from the feeling of inferiority in arms and in means of communication. Canons and breech-loaders, railways and telegraphs were the desirable things, for the sake of which they first entered into closer communication with Europeans. The army was reorganized, a fleet established, and, under the direction of the English engineer, Brunton, the coast was more efficiently provided with a series of lighthouses than many European shores. A native steam navigation company (the Mitsubishi), supported by the government, organized the coasting communication, and took it out of the hands of foreigners, as well

as the postal communication with Shanghai. A telegraphic network, which, as well as the railways, was laid down by Englishmen, connects Tôkiô with all the larger towns of the country. Submarine cables run to Shanghai and Wladiwostok from Nagasaki and Shimonoseki respectively, so that the capital of Japan can communicate by telegraph with all the larger places in the civilised world. The postal service is equally well organized. The railway from Tôkiô to Yokohama was followed two years afterwards by a second line from Hiogo to Ôzaka, which now runs as far as Kiôto and Ôtsu, on Lake Biwa, and will before long also run along the east side of this lake to Tsuruga.

The development on the other hand of a good system of roads, and the introduction of postal and heavy vehicles for internal traffic, have not yet received the attention which they call for in the interest of communication in the interior. The old Japanese dô or highways, which, as in the case of the Tôkaidô, Nakasendô and others, have in part existed for over a thousand years, were and are not artificial roads as with us. Macadamised portions are not met with in them, and paved portions only occasionally, where the steepness of some important mountain pass rendered them necessary. Military considerations alone operated in their construction, and as heavy baggage wagons were unknown, and people went on foot, rode or were carried in a palankeen (Norimono, Kago), while until quite lately baggage and goods were transported almost exclusively by porters or pack-animals (horses and oxen), the necessity for a solid foundation and greater breadth did not present itself. Even now there are hardly any vehicles upon the highways except the numerous Jinrikishas,¹ a few post-coaches, which run from Tôkiô along the better parts of the Tôkaidô, Nakasendô, and Ôshinkaidô, and clumsy carts in the larger towns. The same road is of varying width ; in one place narrowing down to a mere path, in another being as much as 10 metres or more in breadth. Here it runs over a solid rocky or pebbly substratum, there over alluvial soil between rice-plains, which, in rainy weather, easily bestow upon it a portion of their overflow. The passage of the rivers is effected by means of gangways, bridges, and ferries, but is frequently interrupted for days together during violent continued rain, because the mountain streams then swollen into mighty torrents, only too often carry away the light wooden bridges and gangways, and no boatman can guide his craft through the floods.

Along the borders of Japanese highways are frequently planted

¹ This is a vehicle of very recent date, which was introduced by an American, and rapidly became very popular. It consists of a light, two-wheeled car, with a seat above the axle for one or two persons. This vehicle is only employed for carrying people, especially in the towns. It is drawn by a man who takes the place of a horse between the shafts, and hence the name Jinrikisha, *i.e.* "Man-power carriage."

evergreen conifers, above all the favourite tree of the country, the pine (*Matsu*). Its trunk is often five or six metres in circumference, and 25 to 30 metres in height. The cypress (*Chamæcyparis*), and the more stately *Cryptomerias* (*Sugi*), are less frequently found as border trees (see illustration, Imaichi).

In the departments of education and sanitary matters great advances are unmistakeable, though in judging of the achievements of the "Tôkiô University" (*Kaisei-Gakko*), and of the flourishing School of Medicine, conducted by Germans, we must, for manifold reasons apply a more modest standard than in the case of our highest seminaries.

In enumerating the great social changes which have taken place during the reign of Meiji, we must also remember that the *Harakiri* has been abolished as a punishment, and the wearing of swords as a distinction of the Samurai, and that the latter, like the *Heimin*, is subjected to the general obligation of military service, and has ceased to be the privileged soldier. He is more and more learning to recognise the necessity and honourableness of labour, whether of a mental or physical character, and is no longer ashamed of either trade or industry. The disappearance of his arrogance keeps pace with the growing self-consciousness of the people. The old barriers are broken down, and there is everywhere freedom of movement. Japan has entered into communication with the world, maintains embassies and consulates in Europe and America, and fills a distinguished part in international exhibitions. She takes an interest in the events of the great world. Along her highways the foreigner travels more safely than in many European countries, and without being importuned by beggars; the well-organized post transports his letters as safely as at home. These are, indeed, great advances in a comparatively short period! But even if modern commerce had introduced into the country only the petroleum lamp and compulsory vaccination,¹ these alone would be benefits enough to more than counterbalance the sums spent upon many useless experiments.

We will not attempt to bring forward at any length the dark side of the advantages arising from the modern intercourse of the Japanese with the rest of the world, and will only devote a few words to the administration of the finances, to jurisprudence, and to the questions connected with them. Among the growing anxieties of modern Japanese statesmen the bad condition of the

¹ Vaccination was indeed introduced into Nagasaki by Dr. Mohnike about the year 1850, but it has only been duly appreciated and practised under the present government. Let any one who still doubts its value cross the Straits of Gibraltar to Morocco, or go to the Japanese, to learn better; let him but observe in Japan the numerous scarred faces among adults, and the smooth faces of the rising generation, and also the numerous blind persons who have lost their sight for ever in consequence of small-pox.

finances and the question of jurisdiction over foreigners must no doubt be considered.

As the imports have during the last fifteen years steadily much exceeded the exports, and the difference has gone abroad in the form of bullion, the stock of cash has continued to disappear and Kinsatsu (paper money) has taken its place. The latter has been increased alarmingly during the last few years, and this not only by the government, in order, *e.g.* to cover the enormous costs of the rebellion in 1877, but also by more than six dozen so-called national banks which have shot up like funguses. The mistakes thus committed were still further increased by the government, which permitted the nobility and Samurai to transfer as merchandise the promissory notes which they had received in discharge of their yearly rents. Large amounts thus came into the market at a considerable discount, and were exchanged for paper money.

Six years ago this Kinsatsu stood at par and was even preferred by the natives to the silver and gold currency; now from 40% to 45% agio is paid. Thus the paper money has become a plague to the country, injuring commerce, damaging credit, and will bring the state to the verge of bankruptcy, if means are not speedily found to avert the evil. Reduction in expenditure, and consequent improvement of credit, another and more fireproof mode of building houses, the introduction of rational cattle-breeding and forestry, would be such remedies, but first and foremost a proper control of the finances and of paper-money by the people.

The merchants in the Japanese treaty-ports, as well as the representatives of their respective governments, have for years been pressing upon Japanese ministers their desire for the opening of other ports (*e.g.* of Tsuruga on the Sea of Japan), or of the entire country, expecting from such a step—probably from a misconception of the productive capacity of the country—a fresh revival of trade from its long depression. The Japanese hesitate to make such further concessions, unless they are allowed to exercise jurisdiction over foreigners. Not only do they fear, and with justice, that any further concession in this direction would involve the country in fresh expenses and numerous complications, but their pride and sense of independence revolt against not being in this point put upon an equal footing with the Treaty Powers. The latter have, however, serious grounds for declining to strike this clause out of the treaties; their representatives are acquainted with Japanese jurisprudence and have as yet no confidence in it. They know that the country lacks juristically trained judges, that its legal notions still differ in many points from ours, that the prison system is in need of reform, and that the Japanese prisoner under examination is still frequently exposed to a cruelty of treatment which with us is not even inflicted upon the convicted felon.



AN AINO FAMILY.

II.

ETHNOGRAPHY.

I. AINOS AND JAPANESE; ORIGIN; PHYSICAL CONFORMATION AND MENTAL ENDOWMENTS.

THE natives of Japan are divided into two branches of the Mongolian race—the Japanese proper and the Ainos. The latter inhabit the region to the north of the Tsugaru Straits, the islands of Yezo, the Kuriles, and the southern portion of Saghalien as far as the 50th degree of latitude. Doenitz and Hilgendorf, and later on Scheube, have instituted a minute investigation of their physical conformation, and have published its results in the “*Mittheilungen der Deutschen Gesellschaft Ostasiens.*” These show it to be an undoubted fact “that the Ainos are Mongolians, who differ less perhaps from the Japanese than the Germans from the Roumanians.” Though the straight eyes and firm features, and above all the strong growth of the beard among the men, lends them a certain likeness to Europeans, this is only apparent, and disappears on a nearer examination.

In stature the Ainos¹ are small, like the Japanese, but stronger and broader shouldered. Their average height, according to Dr. Scheube, is 1·5 to 1·6 metres, and from 1·45 to 1·53 of the females. Their complexion, although materially influenced by the sun and the want of cleanliness, is darker than that of the average Japanese, has a brownish tint, and tends to pass into the colouring of the Berber or perhaps still more into that of the North American Indian. The Mongolian type is strongly marked in the form of the face and in the hair. It is easily to be recognised in the flat somewhat angular face with projecting cheekbones and thickish lips; in the broad, depressed base of the nose, with its wide nostrils and flatly rounded end; the eyes, though not placed obliquely, are nevertheless of slit shape and well characterized especially by the fold on the upper eyelid. The apparently high forehead is flat and slopes backwards.

As compared with other Mongolian peoples, particularly the

¹ The name Aino signifies, according to Pfizmaier, “Bowmen”; according to the Japanese, on the other hand, it is a corruption of inu, “dog,” and consequently a contemptuous designation bestowed by them upon this good-natured, uncivilised people, as well as upon other Yebisu (Ebisu-ban), barbarians.

Japanese and Chinese, the Ainos chiefly strike us by their abundant growth of hair; the waving beard as well as the luxuriant hair the growth of which is not checked in the case of the men by either razor or scissors, gives them an aspect of manly dignity, with which however the rest of their appearance by no means corresponds. The strikingly vigorous growth of hair has indeed been frequently exaggerated, yet it is in the case of the older men, even on the breast and back, decidedly stronger than among Europeans. But the hair of the Ainos resembles that of the rest of the Mongols, not merely in its greater thickness and the elliptical form of its section, but also in its black colour and great stiffness, and has even in the beard, in the armpits, and other parts of the body, just as little tendency to curl as in the case of the neighbouring people. Among the Ainos the women by no means constitute the "fair sex." Their appearance produces a less pleasing impression than that of the men, especially as they still further disfigure the heavy face with the short kept, rough hair, by a blue tattooing on the upper lip, which in the illustration looks like a moustache, (see the accompanying sketch of an Aino family, in which the man vividly reminds us of a Russian peasant).

We vainly seek among the Ainos the sense of cleanliness so justly lauded in the case of the Japanese; nay, it is asserted that with many of them the washing and bathing of the body is absolutely unknown. How great must be the neglect of the body among their relatives, the Polar peoples living to the north of them and inhabiting Eastern Siberia, when Rittich says of the Ainos, that they were distinguished by their greater cleanliness.

In intercourse with others the Ainos exhibit a childlike kindness and good nature, and are at the same time timid and submissive, so that it was easy for the pushing Japanese to become their masters.

They hold firmly to the old patriarchal habits and practices, and despite of brilliant temptations, are extremely loth to abandon their simple implements, which serve chiefly for fishing and hunting, for as yet these children of nature have troubled themselves but little with agriculture and the cultivation of vegetables, even when the soil and climate have been favourable. The example of the Japanese who have settled near them has only here and there induced them to cultivate a little millet and beans.

Their simple clothing consists chiefly of a coarse smock frock with wide sleeves, which is open in front and confined around the loins by a girdle. They frequently decorate its borders with stripes of a blue cotton stuff, which they purchase from the Japanese and on which they also execute embroideries. The brownish-yellow thread used for this purpose is prepared by the Ainos from the inner rind of a smooth-barked elm (*Ulmus montana*) which is called by them *Ohiyo*.

The slender requirements of the Aino are to be recognised even in

his dwelling. This is a low hut, supported on posts, which are driven into the ground round a levelled open space, are surmounted by a structure of poles as a roof, and like this are covered with reeds. Two openings, capable of being closed, the one serving for a little door the other to admit the light, complete the exterior. The floor in the interior consists of smoothed and trodden-down earth. Around the walls run raised benches, covered with coarse mats, which serve as sleeping-places. Heat, smoke and vermin, as well as bad smells, make it unbearable to a stranger to stay in such habitations in summer, while they can hardly furnish sufficient protection against the cold winds of winter. The language, religious ideas and customs of the Ainos, with the exception of the most striking of them, have, like those of their northern relatives, the Gilans in North Saghalien, been as yet too superficially investigated to afford a complete and comprehensive view. While all higher religious observances among them are denied by some, according to others the sun and moon as well as the bear, as Kamui, appear to receive Divine honours. The bear indeed plays a prominent part in the life of the Ainos. When a young cub has been hunted down by dogs in spring, it is brought home to the village and here reared by a nursing Aino woman upon milk, as if it were a child. When the nursling has become somewhat bigger, it is fed upon fish, and thus by autumn attains a considerable size. Then a great feast is prepared, at which it is killed in a peculiar fashion, and eaten with numerous ceremonies. The particularly striking and unintelligible part of this proceeding is the fact that while the young bear is being carefully reared, its presence in the Aino household has not merely the object of affording an excellent dish; the animal being, on the contrary, regarded with reverence as a fetich, or indeed as a sort of higher being. A peculiar custom, moreover, is the mounting upon the stakes of dead hedges or upon posts near the dwelling houses, of the skulls of the bears which are killed in the chase.

The number of the Ainos in Yezo is very variously given, as from 17,000 to 80,000, though 17,000 is probably nearest the truth. They are found in little villages along the coast and larger rivers, but not in the mountainous interior.

The Gilans in northern Saghalien and the Kamtschadals in Kamtschatka to the north of the Kuriles, are near relatives of the Ainos. All these peoples, as well as many other small tribes of north-eastern Asia, are distinguished by Rittich from the Mongols, and grouped together as Hyerboreans, or Arctic tribes, and he points out that their origin is still completely unknown.¹

The modern Japanese (Nippon Jin) are a mixed people, sprung from foreign immigrants, most of whom occupied the southern

¹ A. F. Rittich, "Die Ethnographie Russlands:" *Ergänzungsheft* 54 zu *Petermann's "Mittheilungen."*

portion of the empire long before the Christian era, and then made their victorious way towards the north, and form an already existing aboriginal population. Japanese history makes mention of these aborigines only in the north of the island of Hondo, calls them Emishi and Ezo (Yezo), points out that they tattooed themselves and neglected their hair and beard, but otherwise affords little information about them. It is supposed however that they also belonged to the Mongolian race, and though not of the same stock as the Ainos, were still a kindred race, and that their main sources of livelihood also consisted in fishing and the chase.

Whether the well known weapons of the stone age, which have frequently been found in Japan, belong to the Emishi, or to a still older people, whom they only succeeded as immigrants, has not been ascertained. On the other hand the copper bells, which have from time to time been found in large numbers, in turning up the soil, but never further north than the Hakone Mountains, and some of them more than 1,200 years ago, date without doubt from the earlier age of the present people, as it cannot be supposed that their predecessors had any knowledge of copper and its working.

As the Japanese only became acquainted with a written language, viz. the Chinese, in the third century of our era, and their own syllabic character derived from it, the Katana, is of still later origin, while their earliest historical work, the Kojiki, dates from the year 711, we do not find in Japanese literature any data for the solution of ethnological problems. Old structures, which generally afford such valuable material to the student of this subject, are likewise absent, the most ancient known monument being that of Taga-jô-no-hi, which was erected in the east of Sendai in 761. The ruins of shapeless stone buildings found near Hakata, in Chikuzen, are certainly of very great antiquity, but offer nothing that could lead to an exact determination of their date or of their constructors.

The solution of the question as to the origin of a people which has appeared in prehistoric times upon foreign soil, presents in this as in every other case, special difficulties. It cannot be decided by physical conformation alone, for this, as is well known, gradually changes with climate and mode of life, and still more by admixture with other races. Nor does language always offer certain data, for Europe and its history show us numerous examples of conquerors and conquered, who have given up their own language after contact and adopted that of the people with whom they are associated. Even customs and mode of life, the construction of domestic and agricultural implements, etc., valuable as are the ethnographical indications and hints which they may furnish, are not of themselves sufficient. Only when several of these indications point to the same origin, are we justified in assuming it to have been the common starting-point.

The Japanese legend, as already pointed out in the first chapter of this book, derives the origin not only of Ōyashima but also of the ruling family, and indeed of the whole Japanese people, from the divine pair, Isanagi and Isanami. Of the five children borne to him in Awaji, Isanagi loved his two eldest daughters the best. They had been begotten from his eyes while washing in the sea, the firstborn from the left, the younger from the right eye. He promoted them to the heavens as goddesses of the sun and moon, and made them mistresses of day and night. Amaterasu-o-mi-hami (Chinese, Tenshō Daijin), *i.e.* the deity shining from the heavens, ruled over the earth, which was subjected to her, and Tsuki-no-kami, the moon-goddess, took her place during the night.

The grandson of the sun-goddess is called Ninigi-no-mikoto. He received from her the commission to descend from the heavens and govern the earth. With his heavenly sword, called Ama-no-sakahoko, he explored the ground beneath him, then settled in Takachiho of Kirishima-yama, on the borders of Hiuga and Ōsumi, and established a kingdom in Kiushiu. His great grandson was Jimmu-Tennō (see p. 214).

Divested of his mythical adornment, this founder of the Japanese ruling house appears to us as a Norman Viking, sailing forth with his followers in search of adventure and conquest. The foes, whom he met and overcame, cannot have been a foreign people, but one allied to him in race and language, descendants of immigrants who, like his own ancestors, had come over centuries before, most likely from Asia. In support of this view it may be pointed out amongst other things, that in the History of the 12th Mikado (p. 217), a high dignitary is mentioned, whom his sovereign sent out upon a tour of inspection to the north-eastern provinces. Upon his return he told the Mikado of a curious people who inhabited the far north, allowed their hair to grow without cutting or even dressing it, and practised the repulsive system of tattooing. He called this people the Emishi or Yezo (pronounce Esso).

It may doubtless be hence inferred, that this new and surprising phenomenon presented a contrast to the civilisation of the conquered country, and that it could only excite surprise if the whole people, the descendants of the conquerors who came from Kiushiu as well as the conquered, possessed from the first, to a considerable extent, a community of language, customs and origin. This follows, moreover, from the names of the foes overcome by Jimmu-Tennō and his successors, which are mentioned in the early historical documents, and are formed in the same way as the names of the conquerors. If, as we may further suppose, the southern portions of the Japanese Empire were not uninhabited when the immigration of Jimmu-Tennō's ancestors took place, but probably peopled likewise, though but thinly, by Emishi or their kinsfolk,

then a complete fusion had subsequently taken place, as afterwards in the case of the natives of northern Hondo.

Old Japanese traditions point to an early settlement not only of the island of Kiushiu, but also of western Chiugoku, particularly of the provinces Idzumo, Hôki, and Iwami, as well as of the island of Ôki. Whence then came the immigrants, and what means have we of tracing their origin? Such and similar questions are not new; foreigners and intelligent Japanese have of late frequently raised them, without receiving an entirely satisfactory answer. The Japanese people undoubtedly deviate so considerably in physical conformation, language and customs from the neighbouring peoples, that only an indirect affinity with them appears possible, and no direct derivation from them admissible.

It has been suggested as a possibility that the first Japanese who landed in southern Kiushiu, were sailors, and in fact, Malays, who had been driven out of their course, and having come within the influence of the Kuro-shiwo, had been carried by it to the coasts of the Japanese islands. Doenitz, who shares this view, thinks he finds in the facial expression of the Japanese, in the construction of their houses, which remind him of the pile dwellings of the Malays, and in the arrangement of their latrines, evidences of their Malay origin.

The possibility of Malays having been carried away by the Kuro-shiwo must be admitted, though history does not record any instance of it. The connecting link between Kiushiu and the Malayan Archipelago is formed by the Loochoo Islands, the first land which the Japanese current washes. Hence Malays might, and indeed must, be sooner and more easily carried to these than to Japan proper. We do not find among the Loochoo islanders, however, any closer approximation to the Malays, who, on the contrary, agree in all essential points, in physical conformation, clothing, mode of life, language, customs, with the Japanese, and exhibit moreover in some particulars a remarkable likeness to the Coreans, as in the whole figure and in the dressing of the hair. (Compare the annexed sketches of a Loochoo islander and of a Corean with the Aino-group, p. 383.)

As regards the construction of the dwellings, it must be pointed out that this is principally the product of what is required and the means of satisfying it; accordingly, as a matter of fact, peoples quite strangers to each other and widely removed both in space and time have adopted the same mode of house-building. Throughout the whole monsoon district, buildings are made of bamboo cane, palm, or light wood-work, and in view of the abundant rainfall the houses must be raised above the ground by posts or single stones at the corners, that there may be a current of air through to protect the floor from damp and decay. The pile arrangement only disappears when, with the advance of civilisation

and a correspondingly greater wealth, a solid wall takes its place. Japan exhibits these transitions in abundance.

The Japanese language has no relationship with Malay and Polynesian, either in structure or vocabulary. It is polysyllabic and places the verb at the end of the sentence, somewhat as Cæsar especially among Latin writers is fond of doing ; while in the Malay family of languages, as in Chinese, the verb must precede the



COREAN.

object which it governs. In Japanese the adjective does not follow the substantive as among the Malays and South Sea Islanders, nor the genitive the nominative, but precedes it. In the same way many other radical distinctions might be pointed out, which prove that, even philologically, no such Malay influence, and therefore no such immigration as that supposed, can be recognised.

The Japanese national character is more akin to that of the

Polynesian than to the Malay. The lascivious dance of the Sandwich Islanders, the Hula-hula, for instance, is probably all but rivalled in indecency by the Ôdori, which used frequently to be performed for the benefit of foreigners at Nagasaki, formerly the Naukratis of Japan. The Lome-lome or shampooing of the Kanaks is carried out precisely like the Amma of the Japanese, only that in the former case girls, in the latter men perform the cracking of the limbs and kneading of the body. The Kanaks came from the islands lying under the equator to the south of the Sandwich Islands, and thus an immigration of related tribes into Southern Japan is also conceivable. Ethnography however must keep to facts, and these point us in an entirely different direction.

According to Chinese annals there came about 1200 B.C. Tartar tribes to Corea, and settled partly here, partly in the eastern islands. If then the facial type and hair of the Japanese is Mongolian and not Malayan, the language points beyond Corea to the Tartaro-Mongolian stock in Central Asia, and if finally the position of the country and ancient traditions easily admit of being brought into harmony with the story told by the Chinese, the probability appears very great that the immigrant Japanese were in fact a member of that great Altaic family of peoples, which was once dispersed in all directions from its primitive home, and distributed itself all over Asia, from the Pacific to Pontus and the Mediterranean. Across Corea, Tsushima, Iki and Oki, this detached member, the forefathers of the Japanese people, found its way to Southern Japan, and gradually took possession of it, from the Loochoo Islands perhaps as far as to the latitude of the Hakone Mountains, or even farther northward, while kindred tribes, such as Coreans and Manchourians, settled on the neighbouring continent.

The supposed primitive population of Southern Japan was upon our view partly supplanted, partly assimilated, as did in fact happen later with the Emishi in the north of the island of Hondo. Long after this process of fusion had been completed in Southern Japan, Jimmu-Tennô appeared. With the establishment and extension of the Mikado's empire by him and his successors, is connected, at the beginning of the third century of our era, the partial subjugation of Corea by the empress Jingu-Kôngô. A partly voluntary, partly compulsory immigration of Coreans—later also, though in a less degree, of Chinese—followed this event, and was repeated from time to time in the course of the next eight or ten centuries, while Emishi from the north were likewise being distributed among the more southern provinces. These various kinds of foreign elements were gradually taken up by the Japanese people, and essentially assisted in more and more obliterating its original character.

At the same time we meet even now, in the most different parts

of Japan, two easily recognisable types, one of which, apart from the development of the beard, approaches that of the Ainos, and exhibits a much more decidedly Mongolian countenance than the other. It is marked by a darker colour of skin, reminding us of that of the Malays, a more compact, stunted figure, with a powerful development of bone and limb. The short, flat face displays under a low brow, almost straight, large eyes, prominent cheek-bones, and a depressed, flat nose, with thick broad alæ. The large mouth is generally somewhat open, the gestures are clumsy. This type is more commonly found in the north and north-west than in the south, and belongs principally to the country population attached to the soil, although a portion of its representatives are found in the highest circles of society. Clearer, yellowish-white complexion, a slenderer figure, more symmetry in all the parts of the body, and a slighter development of limb, are notable characteristics of the second type. The brachycephalic head exhibits a prognathous oval countenance and a higher brow. The large eyes are slit-shaped and veiled by large lids, placed at a more or less oblique angle to the nose, and overhung by lofty eyebrows. The cheek-bones are not noticeably prominent, nor is the mouth; but this is the case with the delicate, slightly aquiline nose. Thus this type presents nobler and more regular features, and as it is found chiefly in the higher classes of society, and in the south more than in the north, it is natural to suppose that it rather represents the immigrant element, the conquerors of the country. The stereotyped oval female face of Japanese painters, with its exaggeratedly oblique slit-like eyes, delicate aquiline nose, and small red lips, although only a caricature, and not in the remotest degree a standard of Japanese artistic skill, belongs to this type. In reality the female sex is here more beautiful than the ideal of native artists; a blooming complexion, with red cheeks and a delicately-cut reddened mouth, are commonly found amongst the girls, and are enhanced by the well-dressed raven hair. They develop early and their bloom is soon over, so that they seldom, if ever, entirely reach our idea of beautiful womanhood.

Between the two fundamental types thus briefly characterized, marked in common by a generally slight growth of beard, limited to the chin, we observe a number of varieties and transitions, to which by far the larger portion of the Japanese population belongs. In fact, Japanese society exhibits a surprisingly large variety and mutability in feature and complexion. The latter, although generally speaking much darker than among Caucasians, approximates in occasional instances to even the fair clear complexion of the Germanic peoples. Not unfrequently the symmetry and regularity of feature are so great and so discrepant from the prevailing Mongolian type, that we imagine we are in the presence of a well-formed European. Among the youths of the Samurai class are found some who are surprisingly girl-like in appearance.

But these are exceptions, and the Japanese people is, on the whole, anything but a beautiful type. Their countenances, however, exhibit intelligence, and are for the most part mobile and expressive.

As compared with Europeans, the Japanese race is of low stature, the height of the male being on the average about 150 centimètres (a little over 4 feet 11 inches), or less than that of their western neighbours, the Koreans and Chinese. As in China, so also in Japan, the average height of the women is considerably less than that of the men; yet we here see neither giants nor dwarfs, nor even the corpulency so frequent among the Chinese and many other peoples. Only the pugilists (*Sumo-tôri*) form an exception in this latter respect, and are distinguished by a full bodily development. A very observable distortion of the legs through the knees turning inward frequently destroys the favourable impression made by the rest of the figure, and is particularly noticeable in the men when they assume the closely-fitting European costume. It is probably produced by the peculiar manner in which infants are carried by their mothers, nurses, or elder sisters. They are fastened firmly against the back by a cloth which the bearer throws round her own shoulders and body and over the back and upper part of the child's thighs, so that the knees are pressed together while the feet are turned outward.

Children springing from the intercourse of whites with Japanese, as a rule take after the latter, just as elsewhere also the Mongolian type in hybrids is sharply expressed, and indeed predominates over the Caucasian element.

(The illustration opposite contains six persons of the higher class of society, put together from photographs, and faithfully reproduced. Of these, only the Samurai standing to the left presents the ordinary facial expression inclining to that of the Ainos, but not in its purity. The representatives of the nobler type are more true to it, especially the three standing figures—to the right, the daughter of a Kuge, as may be seen from the fashion of the hair that flows down over her shoulders; in the middle, a Samurai of sixteen to eighteen years of age, with strikingly feminine features; in the background, a nobleman in old-fashioned costume. A very characteristic figure is the old Samurai resting in Japanese fashion upon his knees, as is also the figure seated upon a European chair, which best expresses the intelligent features of the Japanese in maturer age.)

Most foreigners who have as yet written about Japan, have been acquainted only with the external aspect of its popular life. Even to those who have spent a considerable time in the country, the serious difficulties of the language, as well as the great differences of race, religious sentiments, modes of thought and of life, have formed as a rule great obstacles to any effort to penetrate it and to understand its inner impulses. For the same reasons a more

intimate relation of friendly intercourse between foreigners and natives, that is, an intercourse resting upon reciprocal regard and inclination, and not upon passion or some other material interest, has as yet but exceptionally existed.

The Japanese exhibit many praiseworthy qualities, which appeal to our sympathies, and which we meet with either rarely or not at all among other Oriental peoples. As the aspect of natural beauty gladdens the new-comer in the empire of Nippon, so too is he pleasantly surprised by the cleanliness of its inhabitants, by their friendly and humane nature—which is not lacking in dignity and self-consciousness, by their intelligence and sensibility to the beauties of nature and the advantages of Western civilization, and is charmed with them, somewhat as a guest to whom his host offers a friendly reception. No wonder that under such circumstances the judgments of those strangers, who have made but a brief stay as visitors in Japan, are extremely favourable to the people. The Japanese are amiable, accommodating, and given to imitation; they are curious, but not communicative. Their narrowness, however, in everything relating to government, religion, etc., must be attributed partly to ignorance, partly to a peculiar education continued through centuries under the pressure of the laws of Iyeyasu and of a system of espionage. In love of truth the Japanese, so far as my experience goes, are not inferior to us Europeans.

"I now returned," writes a fellow-countryman and acute observer, "into a country that I knew, and for which I had felt a deep longing while in the heart of China. Dirt, smells, deceit, mean and revolting servility, coupled with unjustifiable arrogance, are the chief elements of the Chinese world. The characteristic features of the Japanese world are extreme cleanliness, elegance, a sense of propriety and proportion, an unmistakable dignity and self-respect."¹

The same author, who is also well acquainted with the Poles, institutes a comparison between them and the Japanese, and recognises in them many common features. He finds both industrious, with few needs, and easily contented, hardened against the influences of weather, light-hearted and chivalrous, and is inclined to see in these qualities the deep-lying traces of the Tartar influence, which once made itself felt from the Oder to the Pacific, and which may be detected not only in their habits and views of life, but also in their language. In many other aspects, of course, the differences between the two peoples are as great and striking as possible.

The Japanese does not hide his light under a bushel. But upon a longer acquaintance, we find that besides the laudable qualities already mentioned and some others, among which must be

¹ Dr. H. Marron, "Japan und China : Reiseskizzen," i. p. 59.

reckoned chiefly the blind devotion and love of children for their parents, and an ardent patriotism, there are many which are not particularly attractive. After many-sided and abundant observation, though not indeed inclined to subscribe to all that any one who returns home with disappointed hopes from Japanese service has to report of the dark side of the character of the people, we yet find among such people many keen observers and objective judges, whose experiences and opinions are entitled to all respect.

With a sense of propriety which in many points is greatly superior to that of most Europeans, is associated a careless exposure of the person and a good deal that we call positively unchaste. The universal taste for flowers, for the beauties of landscape and for the objects of the graphic and constructive arts, is coupled with gross sensuality, the ruinous results of which are frequently conspicuous even to the non-medical observer. Together with ardent patriotism and a peculiar sense of justice, we observe a great inclination to overlook the worst behaviour and much corruption and nepotism amongst officials. To a lively desire for knowledge and quickness in acquiring it, is opposed a want of perseverance and of skill in turning it to account, except in the way of blind imitation. With the superficial and unsystematic character of their knowledge is not unfrequently combined inscrutable shrewdness. The Japanese youth is the most obedient that I have ever known. In their bringing up, as in the management of cattle, corporal punishment is dispensed with, and is indeed, like all violent exhibitions of passion, generally condemned. But with this self-control, which completely puts into the shade that of our chilly Northerners, and which can discuss with a smile upon the lips things that stir our souls to the very depths, is associated a cold calculating cruelty which overtakes and relentlessly strikes down its victim.

It is worth while to quote the judgment of a highly cultured and universally esteemed Frenchman,¹ who had fuller opportunities than most foreigners of appreciating the national character. He writes: "The private life of the Japanese resembles their political life, as perceived from their history, and both resemble the climatic features of the country. Long periods of repose and slumber, alternate with political awakenings and impetuous outbreaks. A natural lethargy interrupted by violent shocks. The fanfaronades of the carnival penetrate the mist of melancholy. Everything proves that theirs is a temperament without equilibrium, a disposition tossed like ships without ballast, a passive nature driven backwards and forwards by fits and starts. There is much love of pleasure and surprises, disinclination for persevering labour; sudden flights and sudden flagging in quick succession, much activity, intelligence, and talent; little principle and no character.

¹ G. Bousquet, "Le Japon de nos jours:" Paris, 1877.

Like the scourges with which their country is visited (Bosquet means Taifûne, earthquakes and conflagrations) their energy has its long sleep and its disorderly awakening."

This judgment of the Japanese national character is indeed by no means a flattering one. It is strikingly opposed to the favourable opinion which has been formed of it in Germany, and indeed throughout the West. Though this latter view may also be exaggerated, I cannot but give in my adherence to it rather than to the other, perhaps because I too have had more opportunities of learning the brighter side of the Japanese, and my judgment is accordingly possibly somewhat prejudiced in consequence.

The Japanese nation is, in my opinion, in many respects a race of children, harmless, confiding, gay and inclined at all ages to childish games, easily interested in anything new even to the point of enthusiasm, but when only half acquainted with it speedily becoming weary of it,—in a word, a people who, like the Gauls according to Cæsar, are *rerum novarum cupidi*; but in many cases are without steadfastness or perseverance. The latter however may be said to apply rather to the higher class of society than to the people, to whom I would apply all the attributes that Thunberg long ago ascribed to the Japanese national character. According to him they are in general intelligent and cautious, free, tractable and polite, curious, industrious and clever, frugal and sober, cleanly, good humoured and friendly, candid and just, honourable and true, though at the same time suspicious, superstitious and sensual. A natural cheerfulness and assiduity remains with the common people even amid severe labour, and is, together with the harmony and peacefulness with which all the occupations of the house and field are carried on, one of the most enviable blessings of the Japanese national character.

One of the prevailing deficiencies of Orientals is their want of steadfastness and perseverance. Japan, as we have already pointed out, proves no exception to this rule, of which the sagacious among the natives are quite conscious. The judgment which one of them pronounced in 1876 in a Japanese newspaper upon the students in this respect, will be confirmed by every foreigner who has had to do with them, and may be easily applied to many other relations.

"Our students," it ran, "fix their eyes upon only the top of the ladder, but pay no attention to the steps by which it can alone be safely reached. They thus acquire a superficial, exterior polish, while they do not properly appreciate solidity. For this reason our people have in externals excellently copied Western civilisation, but it has no solid basis and therefore no stability. Any one who will, like me, devote some attention to this question, will find himself everywhere confronted by a want of thoroughness and steadfastness."

There are however instances enough in which this judgment

does not apply, of young Japanese who pursue their aims with a steadiness and obstinacy, and overcome all the difficulties that present themselves with a perseverance, which deserve all our approbation. Hitherto Japan has shown itself particularly talented in imitation, and has developed little creative power of its own. The products of its earlier civilisation, its customs, laws, literature, and even the artistic industries in which it stands unsurpassed and indeed unrivalled, such as the lacquer and bronze manufacture, the finer porcelain manufacture and silk-weaving, it borrowed, as well as almost all other branches of industry, from China. Now it copies the Christian West. Will it thus attain to a freer independent position in respect of its intellectual and manufacturing activity? The period of schooling is still too brief for us to be able to give a safe answer to this question. Let us then give the emulous and talented scholar time, for "gut Ding will Weile haben."

2. THE JAPANESE LANGUAGE AND LITERATURE. YAMATO- AND SINICO-JAPANESE. KATAKANA AND HIRAKANA. TRANSLITERATION. PECULIARITIES OF THE LANGUAGE. POPULAR POETRY AND LITERATURE.

THE present written and spoken language of Japan consists of the peculiar combination of two very different idioms, of which one descends from the old language of the Japanese, the Yamato Kotoba or Nippon-no-Kotoba (language of Yamato or Nippon), the other from the Chinese, somewhat in the same way as English was composed from Teutonic and Romance sources. As the stock of words employed by a cultivated Englishman shows a higher percentage of Romance than of Teutonic words, so too the better educated Japanese prefers to make use, at all events in writing, of the Chinese portion of his conglomerate speech. But these two elements of the language of Japan, thoroughly as they are intermingled and fused in oral intercourse, including that of the common people, preserve in writing their original character, in so far that the words of Chinese origin are reproduced with their old root-signs, and those of Japanese origin in the syllabic writing. The Japanese language is a mosaic of Chinese and indigenous words, not an amalgam, and it is thus again essentially different from English.

In the age when the Chinese language found its way to the Japanese together with the philosophy of Kôshi and Môshi (Confucius and Mencius), but more especially by means of Buddhism, and came more and more into use among them, they possessed as their own old colloquial language the Yamato, though as yet no written character, but took this—in the form of a syllabic alphabet—about the year 800 B.C. from the Chinese word-characters. The Chinese root-characters have remained the same as in the mother-

country, but their pronunciation¹ has, under the influence of the euphonious Japanese idiom, undergone a powerful metamorphosis and accommodation to the latter, of such a kind, that the numerous guttural sounds of the Chinese have wholly disappeared, all the nasal sounds to the final *n* (*ng*), and likewise the characteristic intonation. Thus, like the Chinese, the Japanese has ceased to distinguish many abstract words by their pronunciation, and has kept an astonishing number of homonyms, whose various meanings can only be recognised by the context and the order of the words, and in some cases only by the written characters. Thus the phonetically written word "San" may mean three, mountain, lord, birth, to reckon with the abacus, etc., and for the syllable "sho" there are at least two dozen different Chinese root-characters and significations.

For the reasons thus indicated a Chinese cannot understand a Japanese, or conversely a Japanese understand a Chinese, while the two can very easily communicate in writing.² This so much modified colloquial Chinese used by the Japanese is usually denoted by the name Sinico- (Sino-) Japanese.

Poverty in the vocabulary of a language is justly regarded as a sign of poverty of ideas in those who use it; but this applies still more to the structure of a language. Agglutinative languages, to which Japanese belongs, do not admit of the same easy and free expression of ideas, as *e.g.* German or Greek, with their developed inflections. Compared with European languages and their literature the Japanese language is poor. This is felt in the intercourse of the present day by every Japanese who attempts to translate from any of the civilized languages of Europe into his own. The appropriate expressions and even ideas are often lacking, and it is doubtful whether the Yamato—for the Chinese element of the common Japanese language with its inelastic forms is of course out of question—is sufficiently capable of development and modification to satisfy the increasing demands of modern civilization.

Hitherto it used to cost a young Japanese some seven years labour to learn by heart the Chinese word-characters, and to become so familiar with them as to employ them with the same facility as his own simple syllabic writing. The effort to attain this result, which moreover was only accomplished by the more talented, was the main task of school-life, so that real intellectual training had to be left very much in the background. The eye

¹ This Japanese variation of Chinese signs is called Kan-on or Tion, the transference into Yamato is called Yomi. Thus the Japanese read the Chinese signs for Heaven, Earth, Man, "ten, chi, jin," but in Yomi "ame, tsuchi, hito."

² In the summer of 1875 I made the acquaintance at Kiôto of an American, who had worked for twenty years at Shanghai in the mission service, and had thoroughly mastered the Chinese language. With this knowledge he came to Japan, and got along with his landlord excellently by means of writing, although neither of them could understand a word of the other's spoken language.

however and the hand were very much exercised, the former in observing and appreciating forms, the latter in guiding the pencil reproducing them with ease and certainty. The conspicuous achievements of the Japanese in the various branches of their artistic industry, especially as regards taste and decoration, have at all events been essentially assisted by this painting of the Chinese word-characters with the brush and ink.

THE KATA-KANA ALPHABET.

(To be read like Chinese from above downwards, and from right to left, thus :
i, ro, ha, ni, ho, he, to, chi, etc.)

| | | | | | | | |
|------------|----------|------------|------------|----------|---------|----------|---------|
| エ we(e) | サ sa | ケ ke | 井 wi(i) | ツ tsu | ワ wa | ト to | イ i |
| ヒ hi | キ ki | フ fu | ノ no | 子 ne | カ ka | チ chi | ロ ro |
| モ mo | ユ yu | コ ko | オ o | ナ na | ヨ yo | リ ri | ハ ha |
| セ se | メ me | エ ye(e) | ク ku | ラ ra | タ ta | ヌ nu | ニ ni |
| ス su | ミ mi | テ te | ヤ ya | ム mu | レ re | ル ru | ホ ho |
| ン n | シ shi | ア a | マ ma | ウ u | ソ so | チ wo | ヘ he |

NOTE.—The syllable mi is also frequently denoted by three parallel strokes leaning towards the right, or by three horizontal ones, like the figure three.

From an ethnographical point of view the Yamato principally claims our interest. Kôbô-Daishi,—who had spent nineteen years in China, and besides Chinese knew also Sanskrit and Pali, and was one of the greatest scholars and promoters of Buddhism in the time of Shomu-Tennô (p. 222), introduced in the eighth century the Kata-kana,¹ the Japanese syllabic writing, selecting forty-seven Chinese ideograms which he simplified and adopted as signs for as

¹ The name Kata-kana is derived from kata, “the half of a pair,” kari, “borrow,” and na, “name.” They are syllables which were borrowed from the halves of Chinese names (ideograms). Hira means “flat, smooth.” The introduction of Kata-kana is attributed to Kibi Dai-jin (or Kibi Mabi), who had lived in China for a long time, and after his return to Nara in 735 A.C. was made minister (Dai-jin).

many syllables, to which a forty-eighth sign was added for the final and nasal *n* of many Sinico-Japanese words; for this Kata-kana served also for the transliteration of Chinese signs, for all those who did not understand them. The Japanese alphabet, which thus came into use, is also called after its first three syllables *I-ro-ha*. Besides the simple angular and quadratic signs of the Kata-kana there gradually came into use a cursive writing, the Hira-kana, in which the corners are rounded off, and the lines connected with one another. This Hira-kana is the writing of the people, while the educated and official classes employ exclusively or predominantly the Chinese ideograms.

In Japanese A B C books this alphabet, to facilitate its learning by heart, is usually arranged in the following order: *a, i, u, e, o*;—*ka, ki, ku, ke, ko*;—*sa, shi, su, se, so*;—*ta, chi, tsu, te, to*;—*na, ni, nu, ne, no*;—*ha, hi, fu, he, ho*;—*ma, mi, mu, me, mo*;—*ya, yi, yu, ye, yo*;—*ra, ri, ru, re, ro*;—*wa, wi, wu, we, wo*, as it appears in the following table. In this, instead of the above forty-seven syllables

| | | | | | | | | | | |
|--------|-------------|---------|-------------|---------|---------|---------|----------|----------|---------|--------|
| ン n | ワ wa | ラ ra | ヤ ya | マ ma | ハ ha | ナ na | タ ta | サ sa | カ ka | ア a |
| | 井 wi (i) | リ ri | 〇 yi (i) | ミ mi | ヒ hi | ニ ni | チ chi | シ shi | キ ki | イ i |
| | 〇 wu (u) | ル ru | ユ yu | ム mu | フ fu | ヌ nu | ツ tsu | ス su | ク ku | ウ u |
| | エ we (e) | レ re | 〇 ye (e) | メ me | ヘ he | ネ ne | テ te | セ se | ケ ke | エ e |
| | ヲ wo (o) | ロ ro | ヨ yo | モ mo | ホ ho | ノ no | ト to | ソ so | コ ko | オ o |

there are fifty, and the final *n*, so that three are counted twice, viz. *yi=i*, *wu=u*, *we=ye*, to fill up the rows for the sake of helping the memory. When the syllables of the *k*-, *s*-, *t*-, and *h*-series of the last combination follow open vowels in words of several syllables, their initial sound is altered, viz. *k* is changed into *g*, *s* (*sh*) into *z* (before *u* into *dz*), or in some cases *j*, *t* into *d*, *ts* into *dz*, and *ch* (*ts*) into *j*, *h* (*f*) into *b*. In this way there arise twenty further syllables which are called *Nigori* (modification is called *nigori*) or impure syllables. Their signs are the same as those of the original syllables only that to the latter are annexed above on the right two hooks, as shown in the example on p. 400, which contains in the first and third horizontal row the original syllables arranged in our method from left to right, and among

them in the second and fourth row the Nigori syllables. In the fifth row appear the five syllables of the h- series with another diacritic sign, the maru (circle) which indicates the h (f) transformed into p, or the syllables pa, pi, pu, pe, po. The Kata-kana exhibits, therefore, including the n, nigori and maru, altogether seventy-three syllables.

NIGORI AND MARU.

| | | | | | | | | | |
|---------|----------|----------|---------|---------|---------|----------|----------|---------|---------|
| カ ka | キ ki | ク ku | ケ ke | コ ko | サ sa | シ shi | ス su | セ se | ソ so |
| ガ ga | ギ gi | グ gu | ゲ ge | ゴ go | ザ za | ジ ji | ズ dzu | ゼ ze | ゾ zo |
| タ ta | チ chi | ツ tsu | テ te | ト to | ハ ha | ヒ hi | フ fu | ヘ he | ホ ho |
| ダ da | ヂ dji | ヅ dzu | デ de | ド do | バ ba | ビ bi | ブ bu | ベ be | ボ bo |
| | | | | | パ pa | ピ pi | プ pu | ペ pe | ポ po |

By the modification of hard syllables into soft ones, as we find in the Nigori, a greater smoothness of speech is produced.

In the following examples, which have been chiefly borrowed from the geographical portion of this book, the consonant altered by Nigori or Maru is distinguished by blacker type. The phonetic writing of most words with Maru doubles the p.

Kaga, Tone-gawa, Hagi, sagi (heron), Kawa-guchi (river-mouth), uguisu (nightingale), hige (beard), mage (topknot), Nagoya, Tone-gori, Kanazawa, Yonezawa, Sakura-jima, kiji (pheasant), Sudzuki (sea-perch), Kodzu (paper-mulberry), Echizen, Hazekoi (giant-salamander), Yezo, mizo (a furrow), Hida, Sendai, Awaji, jiji (an old man), Idzumi, midzu (water), Miidera, tade (knot-grass), Hondô, Yedo, Chiba, Tamba, Yabi, Bizen, Kokubu, abura (oil), Kurobe, Betsu, Nobori, jibo (the five vowels), pan (bread), happa (64), ganpi (Wickstroemia), roppiaku (600) from roku-piaku, Kin-puzan, seppuku, **P**ei (Taira), Nippon, Sapporo, go-pun (five minutes, from "go" and "fun").

In the transliteration of Japanese syllables and words I have followed, though with a few variations, the usual phonetic method, which Dr. Hepburn employs in his well-known "Japanese-English

¹ The maru is also called han-nigori, *i.e.* half nigori.

and English-Japanese Dictionary." The language can be pretty easily represented phonetically, because the vowel sounds are very distinct. There are no diphthongs proper, nor difficult consonantal combinations. The phonetic transliteration, although it does not fulfil all the requirements of the philologist, has the great advantage of simplicity and brevity. With regard to the pronunciation the following rules are to be observed :—

1. The vowels a, e, i, o, u, are pronounced as a rule full and clear as in the German alphabet, though i and u are often mute, *e.g.* in shita (tongue, down) = shta, shikimi (Illicium religiosum) = skimmi, Amakusa = Amaksa, Hakusan = Haksan. Further in the syllables su, tsu and dzu, especially at the end of many words, the u is heard faintly or not at all, *e.g.* Iyeyasu = Iyeyas, Settsu almost like Setts, Kôdzuke like Kôdzke. Syllables are also not unfrequently contracted and the vowels thus become long, especially o. In such cases ô is written, *e.g.* Ôzaka for Ohosaka, Shôgun for Shiyôgun.

2. The diphthongs ai and oi, which have arisen through contractions (*e.g.* Kai, the province of Kôshiu, from Kahi; and Koi, carp, from Kohi), are pronounced like ei and eu in the German *Leib* and *Leute*, while ei, *e.g.* in Keishi (cassia) sounds like the simple e in the German *leben*.

3. Most of the consonants are pronounced in the same way as in the German alphabet.

In the syllable shi the sh is pronounced nearly as in English, *i.e.* like the German sch and not like a simple s. The correct pronunciation is something between s and sch; it is an s sound with an appended aspirate for the h. In most maps and in many books the syllable occurring so frequently in the word shima, island, is represented by a simple s, but this by no means agrees with the correct pronunciation.

In the syllable chi the ch is sounded as in English and as the German tsch, and in ji the j is sounded like something between ds and dsch.

For the h of the h series an f is used in several districts, *e.g.* in Kiushiu (but not in Bungo) and in Northern Hondo. Accordingly the Dutch, who were only familiar with the dialect of Nagasaki, wrote Firado, Fizen, Figo, Fon, instead of Hirado, Hizen, Higo, Hon, as people pronounce in the greatest part of the country, and above all in its three capitals.

Y is to be pronounced like the German j, though not throughout the whole series of syllables beginning with it, for yi is even by its character not distinguished from i, and ye but slightly so from e. Only in a small portion of the country is ye pronounced distinctly ye, being elsewhere pronounced as e, and thus the proper pronunciation is Edo (instead of Jedo), Ezo (instead of Jesso), and almost universally Echizen, Etchiu, Echigo (are pronounced Etchissen, Etschiu, Etschingo), instead of Yechizen, Yechiu, Yechigo.

In the syllabic series with g this consonant is pronounced simply

like a soft k (as g in the German *gab*), or nasal, like the German ng. The latter is the case in the dialect of the capital, in which Nagasaki, Hagi, Yamaguchi, mugi, Ugo are pronounced Nangasaki, Hangi, Yamanguchi, mungi, Ungo. In Kiushiu and Chiu-goku the nasal sound is not usual.

For l and r the Chinese and Japanese have only one sound, the former the l, the latter an r with a pronunciation somewhat approximating to l. Accordingly the Japanese call the islands between Formosa and Kiushiu, Riukiu, the Chinese Liukiu; among the former the mile is called ri, with the latter li. The Chinese say lice for the English rice, the Japanese makes light into right. The n which occurs at the end of Chinese words—Japanese words always end with vowels—is somewhat nasal, yet seldom pronounced quite like ng in *Menge*, but more as in *man*. When on the other hand it is followed in combinations by b, p or m, it has the sound m, e.g. nan-ban, the Southern barbarian (Portuguese), is pronounced namban; mon-ban (the gate-keeper), momban(g); kinpô-zan = kimpodzan; san-mon, temple-gates = sam-mon(g); kim-pun, gold-dust (from kin, gold, and fun, dust).

In the syllabic series with w this sound is only clearly heard in wa, as in the German *wasser*, hardly in the syllable wo, and not at all in wi, we and wu.

Finally the z is everywhere to be pronounced as a soft s.

The dialectic differences, to which we have already referred, are great, as well in reference to pronunciation as to accentuation, so much so, that the inhabitant of the capital Tôkio can only with difficulty understand people from Northern Hondo or Southern Kiushiu.

The accenting of Japanese words does not observe such rigid general rules as we are accustomed to in German. In general the accent in dissyllabic words rests upon the first syllable, as in Sétsu, Íga, Míno, ôki (great), mídzu (water), nóru (ride). Trisyllabic words have the accent in most cases on the penultimate, quadrisyllabic words on the antepenultimate, e.g. Musáshi, Chikúgo, Iwáshiro, yoróshii (good), hibáchi (stove), watákushi (watakshi, I), kowágaru (to fear). In the case of contractions however, the accent always falls on the doubled or long vowel, in whichever syllable it may be found, e.g. Shimôsa, Ôsumi, takái (high, dear), shiroí (white), Daímiô, Samuraí, Tôkiô.

That the phonetic transliteration of the Japanese language has many inconveniences, there can be no doubt. In the absence of one alphabet adopted by all strangers, too much play is allowed for the individual and national appreciation and reproduction of sounds; moreover, even in the best phonetic transliteration the sound only and not the cadence can be recognised. Above all, however, it is no expression for the etymology of the word, and in the case of homonyms, the number of which is very great, may easily lead to errors and confusion of ideas. Hence these and

other reasons have recently induced several of the leading students of the Japanese language, in particular the English Secretary of Legation, Dr. E. Satow of Tôkiô, to propose and introduce the so-called orthographical transliteration. Here however we must content ourselves with a bare mention of the subject, and must refer those who feel interested in it to the very interesting and instructive dissertation on the subject, which Dr. Satow has published under the title "Transliteration of the Japanese Syllabary," in the *Transactions of the Asiatic Society of Japan*, vol. vii. pp. 226-260.

The Japanese language belongs to the Turanian or Tartar family, and is, like its nearly related members, Turkish, Mandchu, and Mongolian, agglutinative. In all these languages the verb comes at the end of the sentence and after the object which it governs. The Japanese say, *e.g.* *mma wo Kai-mashita*, (I) horse bought, for "(I) bought (a) horse;" *tomodachi wo okuri-mashita*, (we) friend escorted, for "(we) escorted (our) friend." In the imperative they do not put the verb but its object at the beginning of the sentence, and say for Bring me my clothes! "*Kimono-o motte-koi!*" (my) clothes bring (me)! Shut the door! is "*Tô-o shimero!*" (door shut!) The question: Is there any gold? is expressed "*Kane-ga aruka?*" *i.e.* gold is there?

As in the sentence the verb, so too in clauses and simple collocations of ideas the main word, comes last. If, *e.g.* *hachi*, bee, and *mitsu*, honey, are combined as *hachi-mitsu* or *mitsu-bachi*, these phrases correspond in meaning to bee-honey and honey-bee respectively. *Kono machi-no na*, "the name of this street," *hako-no kagi* is, "key of the box," *gin-no ko*, "silver-powder."

As in all agglutinative languages, so too in Japanese, the want of inflexion to distinguish gender, number, and case, as well as in the case of the verb to distinguish tense and mood, is replaced by words which follow the principal word as postpositions or affixes. Their use however makes the language decidedly difficult, and is only a partial equivalent for the wealth which is secured to a language by our inflexions. If we examine somewhat more closely the particular parts of speech, we must first of all point out that the article is wanting. In the substantive there is no distinction of gender or number.¹ The nominative is formed by the affix *wa* or *ga*, the genitive by *no*, the dative by *ni*, the accusative by *o*, *e.g.*

This garden is old, *kono niwa-wa furu gozarimasu*.

The trees of this garden are high, *kono niwa-no ki-wa taku gozarimasu*.

In this garden there are many flowers, *kono niwa-ni hana-ga takusan gozarimasu*.

¹ It is therefore, strictly speaking, inaccurate and a mere accommodation to the plural of European languages, when we have here and there employed *Daimiô* instead of *Daimiô*.

I have seen this garden, Watakushi-wa¹ kono niwa-o mimashita.

The difficulty of the Japanese language becomes particularly obvious when our personal and possessive pronouns have to be rendered. Let us take, *e.g.* the conjugation of the Present Indicative of "to be." This runs:—

| | | |
|--|--------------------------|------------|
| I am, watakushi-wa aru, | We are, watakushi domo | } -wa aru. |
| Thou art, anata-wa aru, | You are, anata gata | |
| He is, ano hito-wa aru, | They are, ano hito tatsu | |
| She is, ano onna-wa aru, | | |
| It is, are (sore)-wa aru. ² | | |

If the possessive form of the pronouns here employed has to be formed, this is done by the addition of *no*, *e.g.* Watakushi-no fune, my ship; anata gata-no tomodachi, your friend. This is only appropriate however for ordinary intercourse, and in addressing superiors different expressions must be substituted.

The Japanese verb has only the three principal tenses, present, past, and future, but is on the other hand rich in forms of predication. A more minute examination of it is however beyond the limits which we have here prescribed for ourselves.³

Their numerals have almost all been borrowed by the Japanese from the Chinese, as the native (yamato) idiom exhibits only the cardinal numbers as far as ten. They are 1 hitotsu (shtots), 2 futatsu (ftats), 3 mitsu (mits), 4 yotsu (yots), 5 Itsutsu, 6 mutsu (muts), 7 nanatsu (nanats), 8 yatsu (yats), 9 kokonotsu (kokonots), 10 tō. In use (before Japanese words only) they lose the final syllable "tsu," *e.g.* futa hako, two boxfuls.

The following table shows that the highest unit of the decimal numeral system generally made use of by the Chinese and Japanese is the number 10,000, or *Man*, and all the higher stages appear as multiples of it; though for 100,000 they also use *oku*. The ordinal numbers are formed from the cardinal numbers by the word "ban" (a watch), which is simply affixed, *e.g.* ichi-ban, ni-ban, san- (sam-) ban, first, second, third, etc. The formation of the numbers of repetition is less simple.

¹ The pronoun is only employed where in English we should lay a stress upon it.

² This is, however, purely a theoretical conjugation, framed to correspond with European grammatical systems. For *am*, *is*, etc., the Japanese use *de aru*, 1°. when the predicate is a noun; 2°. when it is an adjective they use the same; or else the word *am*, *is*, etc., is expressed by the termination, as *yoi* = is good; 3°. when *is* means *exists*, *aru* is used.

³ Those who wish for further information as to the Japanese language may be referred to Aston's Japanese Grammar. In point of thoroughness and fulness the work of J. T. Hoffmann, "A Japanese Grammar," still stands unrivalled. The book has indeed the disadvantage that its author carried on his studies at Leyden and not in Japan itself.

TABLE OF SINICO-JAPANESE CARDINAL NUMBERS AND THEIR SIGNS.

| | | |
|----------------|-----------------|--|
| 1 一 Ichi. | 12 十二 Jû-ni. | 90 九十 Ku-jû. |
| 2 二 Ni. | | |
| 3 三 San. | 20 二十 Ni-jû. | 100 百 Hiaku. |
| 4 四 Shi. | 30 三十 San-jû. | 500 五百 Go-hiaku. |
| 5 五 Go. | | |
| 6 六 Roku. | 40 四十 Shi-jû. | 800 八百 Hap-piaku |
| 7 七 Shichi. | 50 五十 Go-jû. | 1,000 千 Sen. |
| 8 八 Hachi. | 60 六十 Roku-jû. | 10,000 萬 Man. |
| 9 九 Ku. | | |
| 10 十 Jû. | 70 七十 Shichi-jû | 1,000,000 百萬 Hiaku-man. |
| 11 十一 Jû-ichi. | 80 八十 Hachi-jû. | 1880=sen-hap-piaku-hachijû (sen-hachi-hiaku-hachijû). |

The part played in our daily life by the dozen, the score, and the three-score is represented in Japan by the number five. Boxes, cups, and many other things are sold *go-mai*, *i.e.* by the five. But in other respects likewise five is a specially distinguished number. Besides the five fingers and five senses, the Japanese talks, *e.g.* of the *go-giyô*, or five elements (Wood, Fire, Earth, Metal and Water), the *go-in*, or five musical notes; the *go-jô*, or five cardinal virtues (*jin*, *gi*, *rei*, *chi*, *shin*, or humanity, candour, decency, wisdom, fidelity); the *go-kai*, or five commandments of the Buddhists (forbidding theft, lying, intemperance, murder, and adultery); the *go-rin*, or five human relations (between father and son, master and servant, man and wife, friends and brethren); the *go-koku*, or five chief fruits of the field (rice, barley, millet, hemp and beans); then *go-sekku*, or five great feasts of the year, and various other fivefold ideas. Next to the number five the number three also plays a favoured popular part. The *San-ga-nichi*, three (first) days (of the year) are dedicated to salutation; the *san-koku*, three countries *par excellence*, were Japan, China, and India. By *San-jô* are under-

stood the three chief duties of woman (obedience to her father, husband and eldest son, according as the one or other is the head of the family). *San-kiyô* is the term given to the three religions (Shintôism, Buddhism, and Doctrine of Confucius), to which Iyeyasu promised toleration. The three highest ministers of the Mikado (*Daijo-daijin*, *Sa-daijin*, and *U-daijin*) are called collectively *San-kô*; the three lights of the sky—sun, moon, and stars—are called *San-kô*, and the three worlds, or states of all things, present, past, and future (*kon-ze*, this world; *sen-ze*, the fore-world; *rai-se*, the next world), are also designated as *san-ze*.

The Japanese language is, in the opinion of all who have studied it, rich in vowels and euphonious, although in its vocabulary, grammar and syntax too poor, undeveloped, and difficult to satisfy the requirements of a higher intellectual culture. It is, as it were, a clumsy, unmanageable tool, with which even the most skilful worker only partially and laboriously attains his end. This defect will be the more felt in proportion as the present generation seeks to understand our abstract sciences, and becomes more inclined to proceed from mere imitation to independent intellectual creativeness. The idea has therefore been repeatedly put forward that the Japanese language should be exchanged for English, as the most influential and one of the simplest and richest languages of Christian and civilized nations. Not only, however, has national pride to be overcome, but also the dread of the enormous difficulties which would be involved in such a step.

Metrical poetry has not taken a very exalted flight in the countries within the sphere of Chinese civilization. G. Bousquet says, with justice, of this poverty of poetical performances, that it is explained by the difficulties of the unmanageable language. "The thought fades and disappears before it has taken shape, and nothing but the mere skeleton remains." Accordingly the creative power of the educated portion of Japanese society confines itself to counting syllables, to epigrams, plays upon words, and other insignificant intellectual productions.

Much more interesting is the popular poetry, which finds expression in dramas and comedies for the theatre, in novels for the female sex, in a great store of fables, legends, and proverbs. This kind of literature is written almost exclusively in *hira-gana*, the only character with which the common people and women are familiar. The *Hara-kiri* and the vendetta play a great part in the dramas. The comedies are very entertaining. With the great appreciation the people show for the comic and ludicrous, and their marked ability in representing it, we find here the chief forte of Japanese actors. Their rendering of comic scenes from family life is not inferior to the achievements of our most famous actors. The numerous novels which are read in Japan even more than among ourselves, by the female sex especially, deal with the same subjects as the comedies, particularly with love stories.

Of the productions of what may be strictly regarded as the popular imagination, Mitford was the first to give us a considerable number of specimens in his "Tales of Old Japan."¹ The people are rich in striking proverbs, in myths and legends, which particularly interest us by their naïve conception and their poetical charm. A fertile field still remains for the investigator who is familiar with the Japanese language. He need only wander through the country and observe attentively the stories which the people in many places associate with old monuments, bells, temples, and other objects. In the Tōkaidō alone he might find materials for a thick volume. How numerous are the legends that relate to Oto-Hime-Sama, the youthful and charmingly beautiful queen of Riugū-jō, the beautiful castle at the bottom of the sea! Let us here make room for only one of them in the shortest possible form :—

"Urashima Tarō saved the life of a tortoise, and let it go into the sea, where it became very large. When, after many years, he suffered shipwreck and was battling with the waves for his life, the same tortoise recognised him, took him out of gratitude upon its back, and carried him to Riugū-jō to Oto-Hime-Sama, who became very fond of him, and did everything to make him happy. He still felt however a longing for the upper world, to which he desired to make a short visit. The queen at length yielded to his numerous prayers and sent him upwards with a little box, which he was upon no account to open. When he reached the land, he found that he was surprisingly young, but in a world to which he was altogether strange. Curiosity left him no rest; he opened the little box, and thus broke the spell. After an absence of three hundred years, he had returned as an aged man to his old home, and was without the means of returning to his queen."

3. DRESS, DWELLINGS, AND FOOD OF THE JAPANESE. BATHS, COSMETICS, TATOOING. FIRES. STIMULANTS.

The *Dress* of the Japanese has been so often described and pictured, that we may discuss it here very briefly. It is made of hemp, cotton, or silk, to which linen and woollen stuffs have only recently been added. With the exception of the shoes, it is light, pleasing, and generally speaking convenient. In its main features it was and is the same in all classes and throughout the whole empire of Japan, and only in details has it been necessary, in respect of material and especially of cut, to observe exactly the established distinctions of rank between the great classes of society.

¹ A rich collection of proverbs is presented by A. von Knobloch and Dr. Lange in several numbers of *Deutschen Mittheilungen der Gesellschaft für die Natur und Völkerkunde Ostasiens*.

The kimono, a long dress open in front, is the principal garment of both sexes, and differs only in length, cut, and choice of material. It is fastened to the body by a broader or narrower girdle, the obi. It is specially woven of cotton or silk, and in the case of men forms a simple strip of stuff, which is wound several times around the loins. The Samurai used formerly to carry their swords thrust through it on the left side; on the right every one wears a small pocket for the finely cut tobacco and a small pipe. The kimono of the women fits more closely, comes down lower, that is to the ankles, and indeed in full dress forms a train of several feet in length stiffened underneath with wadding. Like the obi it is generally made of heavier materials and in brighter colours than in the case of the men. The obi for the women are, like ribbons in Europe, produced in special weaving factories. They are magnificent stiff fabrics, frequently a foot broad, which go round the body like a scarf, form behind a large butterfly-bow, and then hang down in two long streamers. The wide, flowing sleeves of the kimono form under the elbows hanging bags, which serve as pockets. In these every Japanese carries amongst other things soft paper, which he uses as a substitute for our pocket-handkerchief. Among the better classes the kimono consists in summer of a light cotton fabric, in winter of heavy silk stuff. For the simple labourer or peasant silk is out of the question. He dresses in coarse hempen stuffs, which he produces himself, or in cotton stuff, which he dyes a dirty blue with the native indigo (from the *Polygonum tinctorium*, which is everywhere cultivated for the purpose). The tolerably close fitting trousers (*momohiki*) he puts on, as a rule, only at the beginning of the cold season, together with a kind of stocking. In summer he only wears them by way of protection against leeches in the rice-fields, or mosquitos in the forest. The Japanese do not use shirts or other body linen.¹ The entire costume of the male *Ninsoku* (or common labourer) consists in summer of the smock-like kimono, reaching to the calves, and a pair of *waraji* (straw-sandals) on his bare feet. Many find even the kimono burdensome and superfluous; and are glad to throw it aside in the old-fashioned way, and content themselves with a simple strip of cotton-cloth (*shita-obi*) around the loins.

The Samurai wears upon his kimono or *haori* the family insignia or arms, five or three cockades, of from two to three centimetres in diameter, left white in the dying of the stuff—one on each

¹ The women instead of a petticoat wrap round their loins a strip of stuff, which reaches to the knee and formerly consisted of silk or cotton, according to their position, but carmine-coloured woollen muslin, which is introduced by foreigners in great quantities, has recently almost entirely displaced the native fabrics for this purpose. Both sexes also wear about the chest a kind of vest of black silk, though light and cheap cotton underclothing from Europe is increasingly used.

sleeve, one between the shoulders, and one on each side of the breast—though not on the grey and white striped or white mourning dress (*mofuku*). His special distinction consists in the *hakama*, very broad, short hose, which reach down below the calves, and are frequently made of the same material as the *haori*. To the ceremonial dress belonged besides the *hakama*, the *kamishimo* or *rei-fuku*, consisting of the *kami*, or upper part,—a kind of tunic,—and the *shimo*, or lower part, in the form of wide trousers. The unbecoming dress-coat has for the most part supplanted it among the official classes.

The foot-covering of both sexes consists of blue or white cotton socks, called *tabi*, in which the great toe is divided off, as in mittens, in order to pass between it and the other toes the strap by which the sandals are fastened to the foot. These are called *zori*, but the simplest and cheapest of them *waraji*. They are made of plaited rice-straw and principally used in dry weather. Much clumsier, though as a rule they are made of the lightest possible wood, the *kiri* (*Paulownia imperialis*), are the wooden clogs or *geta*, upon which the foot rests as upon stilts. They are more used upon ordinary occasions than the *zôri* and *waraji*, but not for travelling. The most luxurious foot covering were the now almost entirely obsolete *kutsu*, real shoes, inasmuch as they alone covered the upper side of the foot, this portion of the shoe being made of black lacquered leather-paper.¹ Accordingly the name *kutsu* is also applied to European shoes and boots. The slight fastening of the *zôri* and *waraji*, but particularly of the *geta*, admits of their being quickly taken off and put on, a convenience necessary for the protection of the mats in Japanese dwellings.

The Japanese usually went without any special head covering. With the *Ninsoku* a strip of blue cotton stuff wrapped once or twice round the forehead still serves instead of a cap or hat. To ceremonial dress belonged the *yeboshi*, a stiff, black lacquered hat of leather-paper, which rested upon the shaven crown and was fastened under the chin by a ribbon. On pilgrimages and other journeys the common people are accustomed to protect the head against rain and sun by the *kasa*, a basket-like piece of wicker-work made of willow, bamboo-cane, or rattan. The same word is also used to denote the umbrella of oiled paper. The body is protected against rain by the *itodate*, a piece of mat hung round the neck by a cord, or by the *kappa* (derived from the Spanish *capa*), a waterproof cloak of oiled paper, which, as the name indicates, is of recent introduction, and is not so much used as the primitive *mino* or cloak of plaited straw. The European umbrella, however, is justly earning an increasing popularity, as

¹ In earlier times the foot-covering, at all events among the higher classes, appears to have been more convenient. It was, as we may see from old collections and illustrations, like the slipper of the Chinese

it replaces all the inadequate and clumsy Japanese contrivances against rain, and at the same time—a real *en tout cas*—may be used as a protection against the sun.

Particular pains are bestowed by the Japanese upon the care and ornamentation of their hair. Women of all ages and classes use the rich oil from the seeds of the camellia or tea-shrub, to make their beautiful, raven-black but stiff hair, which often reaches down to their heels, glossy and tractable. Their coiffures are so artistic and tasteful, that no European lady need be ashamed of them. A chignon forms the main feature, and is held together by one or more long needles of tortoiseshell or a cheaper material, as well as by wooden combs, and is further ornamented by twisting into it strips of a peculiar red or blue crape-like fabric.

Amongst the cosmetics of the Japanese women the most important is oshiroi, a paste-like preparation of impure white-lead and starch, with which the face and neck of the girls are smeared, in order to produce a delicate white skin, while carthamine (beni) is used to redden the lips. Married women shave off their eyebrows and stain their teeth black with a kind of ink. This is done by successive rubbing of the teeth with a solution of iron in brandy-vinegar and with powdered galls, though in many parts of the country it is customary for even girls to change the reddening of the lips for the blackening of the teeth as soon as they have passed their twentieth year and resigned the prospect of being married.

The old custom was to shave the heads of children, with the exception of three locks on the crown and temples or of a circlet of hair around the tonsure. This ceased when the girls became five years old. With the boys a change took place on their completing their 14th (according to Japanese reckoning their 15th) year. The Gembuku, a family festival, was celebrated, at which the locks on the forehead were shaven off, the boy was declared to be a man and furnished with another name.¹ Henceforth as an adult he became subject to a different set of rules for the wearing of his hair. Brow and crown were shaven smooth, but the hair at the back of the head was carefully oiled, combed towards the crown and here gathered into a little horn or top-knot, the mage, which was carried through a broad black ring of paper and rested and finished on the bald crown. This fashion of wearing the hair gave employment and wages to many hair-dressers, and involved besides a great expenditure of time. Hence the European fashion, in accordance with which the men submit their hair merely to comb and scissors, has acquired increasing

¹ The festival of the first cutting of the hair is also celebrated in India with great splendour, accompanied by a distribution of presents; here, however, it takes place in the 10th or 11th year.

favour. The women, however, in the decoration of their hair, as well as in their clothing, have remained true to the old customs; except that the blackening of the teeth is properly falling out of use.

The shaving of the face, which for centuries was the universal custom, has likewise been already given up by many men. They wear a hige, or moustache, or even a full beard, if this grows, as is seldom the case, and thus again approximate to the old practice, as it existed before Yoritomo.

The *cleanliness* of the Japanese is one of his most commendable qualities. It is apparent in his body, in his house, in his workshop, and no less in the great carefulness and exemplary exactness with which he looks after his fields.

Every Japanese, great or small, takes if possible his warm bath (yu) every day. The favourite temperature of the water for this purpose varies between 38° and 45° C. (=F. 100-113°), and is therefore, for our sensations, unbearably high.¹ No one in an ordinary way bathes in cold or lukewarm water, not even the peasant, though he is accustomed while at his labour to stand for hours barefooted in cold water; nor the Ninsoku (coolie), though he endures the cold of winter half naked. Only exceptionally, *e.g.* as a self-imposed penance, or in fulfilment of a vow, is a cold bath taken. Thus it used to be the custom for the pilgrims who proposed to ascend Nantai-zan, near Nikkô, first to bathe, as prescribed, in Lake Chiuzenji. Upon one occasion also at Meguro, which is much visited from Tôkiô, I saw an old man, in winter, when the temperature was 4° C. (=39° F.), taking a douche bath in the water of a cold spring, which poured into a basin through a huge carved tiger-head. Then, without waiting to dry himself, he ran naked, wearing only the usual loin-cloth, with the palms of his hands pressed together as if in prayer, over a long piece of cold paving, and up the forty-eight stone steps to the temple, with the bell called upon the god, offered his copper coins, and threw himself down on the ground to perform his devotions. This astonishing performance, perhaps the consequence of recovery from an illness, was concluded by another bath and the process of dressing.

There is a distinction between private and public baths, both in respect of their internal arrangements and also of the purpose which they serve. In the former the bath (furo) is a pretty deep wooden tub of a blunt oval form, but much shorter than the body. At its sharper end projects a small sheet-iron flue, which is connected below with a small fire apparatus, and is employed to heat the surrounding water. The furo is placed according to circumstances near the kitchen, or in a separate bath-room (yu-donô) on

¹ High temperatures for warm baths are also common among other Oriental peoples. Thus *e.g.* Kanitz says of the Turks that they are in the habit of bathing in water of 31° R. (39° C. = 102° F.) and upwards.

the side of the court and garden. Towards five or six o'clock in the afternoon, or even some hours later, according to the quantity used, the water is heated, and then used in succession from the master of the house to the humblest servant. In inns the most distinguished visitor has the preference. After the visitors follow the heads of the family and children; and last come the servants, so that sometimes thirty persons or more one after another use the same water, and the process is prolonged far into the night. The repulsive element of such an arrangement is somewhat lessened when we remember that the process is repeated every day, that soap and other materials that soil the water are not used, the whole consisting rather in a rapid washing down of the body, while an arrangement at the side of the bath gives every one who leaves it the opportunity of washing his face and hands with clean spring water that is not used by anybody else. To the traveller such a bath is a great refreshment. He undresses in his room, throws about him a light cotton gown (*yu-kata*), reaching to the ankles, and held together by a girdle round the waist, and thus betakes himself to the *yu-dono*. In the better houses the bathing arrangements are in connection with the entertaining rooms. A small ante-room with mirror, etc., is used to put on the *yu-kata*. The *furo* in the adjoining bath-room stands upon a trellis-work of laths. Everything is unexceptionably clean, and the bath itself, made of beautiful white *hi-no-ki*, is very inviting. Beside it stands upon a small low table the brightly polished copper or brazen wash-basin in the form of a cylinder of from five to eight centimetres deep, with clean water, and near it a porcelain bowl or glass with drinking water, and a porcelain saucer with salt for cleaning the teeth. The new tooth-brush (*yôji*), which lies near, a white willow rod of the length of the hand, somewhat sharpened at one end, at the other converted by numerous inch-deep cuts into a pretty stiff brush of fibres, can easily be replaced. These utensils for cleaning the teeth are very cheap—a *yôji* costing less than a farthing—and therefore within everybody's reach, and generally in use to a degree which cannot be paralleled among any other people in the world.

With these excellent arrangements, the placing of the bath near the house, and not unfrequently even at the side of the road, stand indeed in strong contrast. The unconcern with which the female members of the household use the bath in view of the men and of passers-by has caused many a European no little astonishment.

There are many public bath-houses for the people in every town. The passer-by easily recognises them by the steam and noise issuing therefrom, for these establishments serve not only the purposes of cleanliness, but those also of entertainment and recreation. Here acquaintances meet each other daily, to smoke their pipes or chat together, before or after their ablutions. Formerly both sexes bathed together without any concern, they are now separated by a plank partition barely one and a half metres high.

The Japanese, though on the whole he does not stand upon a high level of morality, did not upon such occasions indulge himself in anything that was unseemly even according to our ideas. It was only contact with Europeans that opened his eyes, and put an end to this Paradisiacal simplicity. Was it a sign of moral corruption, or even of a want of decency? By no means. In Japan, the grown-up man, accustomed to see his mother and sisters at their work about the house with the upper part of the body uncovered, regards female nudity from quite another standpoint to that of the European. Even the morally very sensitive and high-toned native did not regard it as unfitting for his nearest female relatives to perform their daily ablutions in his presence, and they likewise knew that in so doing they violated none of their country's moral laws. Bashfulness is undoubtedly a product of social life and civilization, as was pointed out long ago by Rousseau. It is no criterion of morality, appears in different forms, and varies with the education of mankind and with the climate in which they have to live.

There is no doubt that the regular use of warm baths among the Japanese contributes greatly to the maintenance and improvement of their health. Rheumatic complaints, to which labour in the rice-fields, fishing, and other occupations, as well as the arrangements of houses, so ill adapted for the inclemency of winter, might abundantly contribute, are usually checked in the germ, and are therefore much less common than with us. Another means by which these and other affections are prevented is shampooing (kneading of the muscles and stretching of the limbs), or amma, which is frequently combined with the bath. It is generally performed by blind men, of which the number is very large, and who make a living by it.¹ As soon as evening sets in, and often even late into the night, they are seen and heard passing along the streets of the town with their long bamboo sticks, and piping monotonously on a sort of flute. Frequently they cry, "amma" (shampooing!), or "momi-riôji" (shampoo cure!); and also, "amma kami shimo ni-ju-shi mon" (*i.e.* kneading from top to toe for 24 mon—or about half a farthing).² This is very cheap, even for Japan, and these terms are only offered by new amma who have not made a connection. Blind women come only when they are ordered, and do not cry in the street.

A sanitary means of quite another description is the Moxa or Mokusa (Jap. or kiu). We frequently observe on the naked

¹ Mekura (the blind), or môjin, as they prefer to call themselves, have, in a considerable number of cases, lost their sight from small-pox, and are much more numerous than the oshi, or deaf and dumb.

² The Japanese monetary unit, the yen riô, or dollar, has 4 bu, or 100 sen, the sen 100 mon. Formerly there were single mon-pieces of iron; 20, 15, and 10 mon-pieces of bronze; but they are now made only in copper of 10, 15, and 20 mon.

arms, shoulders, backs, or posteriors of the Japanese Ninsoku (coolies) and country people, scars of the size of a shilling or more, left by the cautery, which has been employed as a blister to prevent diseases or to draw them away from other parts of the body. The mode of proceeding is as follows: Upon the spot to be treated is placed a felt-like mass of the blossoms of the *Artemisia vulgaris* L., which is kindled by the glowing coal of a fumigating instrument made of the powdered rind of the *Illicium religiosum*, and is so consumed.

Ninsoku were formerly accustomed in many cases, instead of wearing clothes, to adorn their bodies by tattooing; but the government has forbidden this singular practice, which was first introduced in the time of the Tokugawa, and has at the same time effectually put an end to it by making it compulsory to wear clothes. Female beauties, popular heroes, flowers and birds, dragons and other fabulous creatures were to be, and to some extent still are, seen upon naked arms and backs. The execution of such pictures demanded many months of painstaking labour and the application of much artistic skill on the one hand, and enormous patience and fortitude in enduring the pain produced on the other.

In the architecture and internal arrangements of their dwellings, the Japanese have not developed so much talent and taste as in many other things; yet even here we cannot fail to remark a commendable sense of cleanliness. The Japanese house¹ lacks chiefly solidity and comfort, and therefore two of the fundamental conditions which we are accustomed to require in every house: solidity, inasmuch as it is slightly constructed, of wood and other inflammable materials, and is in a high degree exposed to destruction by fire and water; comfort, since it is without furniture, and provides no sufficient protection against cold, damp and smoke. These three things, to which we must add evil odours from the sanitary arrangements, the hardly ever absent rats, and sometimes also fleas and mosquitos, are the frequent torments of the traveller, in a Japanese hostelry.

The great variety in the appearance and in the architecture of the houses between town and village, between rich and poor, and particularly too the variation of architectural styles between one and the same town, to which we are accustomed, is not found in Japan.² The houses throughout the country are built upon one common plan; but the size and fineness of the materials employed varies: the town is only marked by the number of houses and by the businesses carried on by shopkeepers. The Japanese

¹ House is in Japanese *iye*, though the word most frequently employed for it is *uchi*, which properly means "within."

² How far this Japanese style of building has been determined and limited by the frequent occurrence of violent earthquakes, it is difficult to say.

dwelling-house is altogether calculated for a small family of four or five persons, and agreeably with the very modest means and requirements of its owner, is small and simple, so that it can be erected for what is in our eyes the very insignificant sum of from £7 10s. to £50, and presents of course a common, poverty-stricken aspect, without any decoration or convenient fittings. The chief building materials are furnished by various pines and firs, and for the better class of houses by cryptomerias. The Japanese house is a low building of one or two storeys, of light framework, without foundation and with a heavy roof. The latter is supported on wooden posts resting on unhewn stones. Its main supporters are strong beams, which are carefully fitted together. The roof leans at an obtuse angle, as a rule overhangs considerably, is in the case of dwelling-houses simple, in the case of temples and old castles generally turned upwards towards the edge as in Chinese pagodas, in the villages still for the most part covered with straw, in the towns with shingles or tiles. There can be no question that in the construction and covering of their roofs the Japanese display great skill, and that the thick tile or straw roof has a care and attention bestowed upon it which we frequently miss elsewhere.

Parallel to and behind the row of posts erected at intervals of a ken¹ (about two metres), upon which the roof rests, runs again a second row. The interval of three shaku (1 metre) between the two is intended for the verandah. As soon as the heavy roof rests upon these posts and the beams connecting them, the daiku (carpenter) has done his work and the finer workmanship of the sashimono-ya (cabinet-maker) begins. The house, therefore, without a foundation, and resting upon the corner-stones from two to three feet above the ground, is to some extent in the air, though it is not uncommon to add a wall afterwards or to cover in the spaces between the corner-stones with planking.

The size of the rooms, indeed the whole ground-plan of the houses is determined by the tatami,² or rush-mats, with which the boarded floors are covered. They form, without exception, right angles of 6 shaku (nearly 2 metres) in length, and 3 shaku in breadth, and are padded on the under side to a thickness of 3 or 4 centimetres with straw matwork or coarse stuff, and bound at the edges with strips of stuff. In accordance with these, rooms of 4, 6, 8, 10, 12, etc., mats are spoken of. The average height of the rooms is from 8 to 10 shaku (2½-3 metres). They are separated from each other by fusuma partitions, which may be opened or removed altogether. These are frames or shutters of the size of the tatami, covered on both sides with stout wall-paper or

¹ 1 ken = 6 shaku ; 1 metre = 3·3 shaku or foot.

² The rushes used for this delicate fabric, Ii or Iigusa (*Juncus effusus* Thbg.) are cultivated like rice upon marshy ground.

karakami (in well-to-do houses even with gold paper), and running between grooved beams. The space of from 2 to 4 feet broad between the upper cross-beam which bounds such a partition wall and the roof is either closed and painted blue, rose-coloured, or white, or is fitted with fine and artistically-carved open wood-work. Besides the division of the rooms just mentioned, which is involved in the plan of the house, there is another still more moveable division, produced by beautiful folding-screens (*biôbu*).

The Japanese rooms receive their light through the *shôji*. These are shutters something like the *fusuma*, but are converted by finely-planed laths, running lengthways and crossways, into a network of squares, over which tough transparent paper is pasted from the outside. The *shôji* therefore represent our windows, which are called *giaman-shôji* (glass windows).

The verandah is open throughout the day in fine weather, as are the rooms looking upon the street; but in the evening and in rainy weather is closed by the so-called *amado* (rain-doors), to protect the house from intruders and the paper panes from becoming wet. This protection consists of boards running in grooves, and fastened from within by a bolt in the last of them. If any one desires admission into an ordinary house, he goes up to the shutter-door and calls out, "*gomen-nasai!*" (I beg your pardon); or less politely, "*moshi, moshi!*" (I say, I say!) and also claps his hands, upon which the door is opened.

The best rooms are always found at the back of the house, where the verandah leads into the little garden. At the side, and reached from the verandah by a boarded passage, is placed the closet. Underneath the small rectangular opening stands a pan, into which also the urinal empties itself. Towards the street generally lies the living room of the family, and not unfrequently also the kitchen, which, like the rest of the house, is without a chimney, so that the usual fuel—charcoal prepared from oak and chestnut-wood—sometimes fills all the dwelling-rooms with smoke, and not unfrequently affects the great cleanliness here prevailing.

The Japanese rooms lack sufficient privacy and anything like comfort. We miss in them chairs and tables, beds and other things which in Europe are considered necessary furniture. The Japanese does not need them. He leaves his *geta* or *zôri* at the door, so as not to soil the beautiful mats, and is never more comfortable than when resting upon his knees and heels. There are but two articles of furniture indispensable to him—the *hibachi* and the *tabako-bon*, *i.e.* the fire-basin and the tobacco-tray. The *hibachi* is a portable apparatus consisting of a round brazen or bronze bowl, or a wooden box, lined with fireproof clay along the margin, and wood-ashes in the middle, upon which are placed glowing wood embers. The *tabako-bon* is a tray with a similar small arrangement of glowing coal, and a spittoon, instead of which a piece of bamboo-cane is often employed. The *hibachi* serves the purpose

of lighting a pipe as well as of giving warmth. For the latter purpose the older arrangement, the kotatsu, a large square opening in the floor, which is half filled with fire-proof clay and wood ashes, like a hibachi, and has in the middle a little heap of glowing coals, seems better adapted. Near it the inmates of the house, covering themselves with quilted mattresses, seek protection against the cold of the long winter nights. In many rooms, especially in the finest, the one fixed wall forms a sort of recess. The one half of it is called tokonoma. The floor of the room is here raised from 6 to 10 centimetres high, for a width of from 60 to 80 centimetres, and frequently has placed upon it two vases with flowering branches of some favourite plant ; between them formerly stood the katanakake, or sword-rest. The wall behind it is decorated with a kake-mono (hanging picture). This consists of a simple ink-drawing or a maxim of some Chinese sage on an oblong piece of white wall-paper or a piece of silk. The second half of the wall forms a bay, occupied by small cupboards with sliding doors, and black lacquered chests, to receive the bedding, which is only taken out immediately before bedtime. This consists of (1) the futon, or mattress, tightly stuffed with cotton or silk wadding ; (2) the kaimaki, or nightdress, a sort of caftan with wide sleeves, which in winter is also stoutly wadded ; and (3) the makura or pillow. This is a small stool without feet, having a crescent-shaped piece cut out, and covered by a pillowslip of paper or cotton. Covered with the kaimaki,¹ stretched upon the futon, which is spread out immediately on the tatami, resting with the back of the neck in the saddle of the makura, the Japanese enjoys his repose, while the extended kaya (mosquito-net) shelters him from insects. This kaya consists of a loose hemp or cotton fabric, and is made fast to four nails in the ceiling.

The rooms are illuminated at night by andon (lamps) or rôsoku (candles of the vegetable tallow, furnished by the seeds of *Rhus succedanea* and *Rhus vernicifera*).² A large standing paper-lantern, in which the oil-lamp (or andon) burns quietly, is brought into the room together with the bedding.

In one room of every Japanese house is the domestic altar, kamidana, or sacred shrine, a wooden Shintô temple in miniature, in which among other things are kept little tablets bearing the names of gods, before which the master of the house every day performs his devotions.

¹ Instead of the kaimaki the traveller may have a light mattress to cover himself with ; but he will do well if, like the writer, he takes with him two pair of linen sheets and a horse-hair pillow, not only for cleanliness and convenience, but also for better protection against the fleas, which are said to make themselves very much at home in the Japanese night-gear.

² Recently the petroleum lamp has in many places quite supplanted the former means of lighting.

The second storey of a Japanese house is always still lower than the first, and as a rule stands much further back, so that the roof is low in front, and rises much higher in the middle. One-storeyed buildings are however very numerous. The space between the boarded and papered ceiling and the roof is usually inhabited by rats, which at night also visit the sleeping-rooms, and can be very troublesome there.¹

In the country the houses are for the most part detached, while in the towns one wooden structure immediately succeeds another. In consequence of this, as well as of the absence of fire-places, the unsuitable warming arrangements in winter, and insufficient supervision, conflagrations are a regular occurrence.² It is but rarely that a man begins and ends his life under one roof; indeed, I have known Japanese, who had been burnt out eight times in their lives. Under such circumstances it is a good thing that not very much furniture can be destroyed on such occasions, and that the making of a new home is not so serious a matter as it is with us. But a great quantity of wood and a considerable portion of the national wealth is consumed by these frequent conflagrations. There are no societies in which to insure the houses; nor indeed are these of such a nature as to be fit subjects of insurance.

In the great sea of houses of Tôkiô, conflagrations are exceedingly frequent, and flare up in one quarter or another through the darkness of the night. "Kuwaji (kaji) -wa Yedo no hana da"—the conflagration is Yedo's flower—says an old familiar phrase; a flower indeed which blooms now for one and now for another, and drives him out to seek assistance among friends and relatives, who do not fail to render such help as they can towards furnishing a new house. The Japanese submits with infinite equanimity and enviable calm to such a misfortune, and carries away in a great cloth, upon his shoulders, what he has been able to save from his modest furniture.

In the streets is frequently seen a long ladder set up, near which hangs a bell. They serve for a look-out and to give the alarm at the breaking out of a fire. Here and there too, near the houses, are kept rows of buckets with water, so as to be ready to extinguish the flames. This process is directed by firemen, who are a very old institution in the country, and are said to be well organized. Merchants and others among the better classes possess, at a short distance from their dwelling houses, a *kura* or *dozô*, *i.e.* a fire-proof, white-washed building, with thick walls of clay and mud, in which their wares and valuables of all kinds are

¹ It constantly happened to me for instance that they devoured the stearine-candle from the candlestick near my head, and then ran away across me.

² Bousquet justly includes them among the scourges (*fléaux*) of the country. The assertions however, frequently made, that on the average Japanese dwellings are destroyed by fire in seven, or indeed even in five years, are greatly exaggerated.



Rein, Japan I.

A TEMPLE GARDEN IN TOKIO.

Hodder & Stoughton, Publishers, London.

Phototype by Strumper & Co., Hamburg.

kept. The English call such buildings in China and Japan "godowns."

Apart from the great risk of fire, the construction of the Japanese houses is undoubtedly ill adapted to the climate. Though it secures cool, airy apartments in the heat of summer, yet on the other hand, during the much longer cold winter, it affords no adequate protection against the cold air which everywhere penetrates through the joints and chinks. Accordingly in the colder parts of the country, even the more hardened natives can hardly find it comfortable to live in a Japanese house, and this reason alone dictates the gradual transition to a more solid style of building, accommodating itself in a rational way to the various requirements of a dwelling house.

It is not every Japanese householder, especially in the towns, who rejoices also in a *niwa*, or flower-garden; but the summer-house, which is rarely wanting in the most modest German garden, is never found in the Japanese, which being intended only to be looked at, and not to spend any considerable time in, is laid out with much taste and refinement, and kept with care. If there is no little fish-pond in which goldfish and tortoises disport themselves, and in the height of summer lotus-flowers raise and unfold their charming leaves and blossoms, there is still room for a more modest water-basin with salamanders, for a pretty little bridge, for rockeries with beautiful dwarf trees and shrubs and other things of the kind. Often, however, a bush of the *nanten* (*Nandina domestica*), or more rarely a little fan-palm from Southern China, the *tô-shiro* (*Rhapis flabelliformis* Ait.) is all that is found in the narrow courtyard. Fruit and vegetable gardens are not met with in connection with houses.

The accompanying illustration exhibits the garden of the Kameido Temple in Honjo-ku (marked 4 in the plan) at Tôkiô, with stone lanterns and rockeries, water and slight bridges, trees and shrubs under the shears, crippled firs, which are great favourites, and a kind of summer house with wistarias (*Wistaria chinensis*), in order to allow the hanging flower-clusters to be more easily seen and admired.

The Japanese live, as a general rule, very temperately and frugally. In the earliest period, before the introduction of Buddhism, fish, the flesh of wild animals, roots, and fruits, formed their food, then cultivated vegetable products of various kinds came more into the foreground, in particular the most important of them, rice. Freed from the husks and boiled in water it forms the most essential constituent of each of the three meals in the day, and these are accordingly called *gozen* (*i.e.* rice boiled in water), and distinguished as *asa-gozen*, *hiru-gozen*, and *yu-gozen*; literally, morning, midday, and evening rice; just as the Germans speak of *Morgen-*, *Mittag-*, and *Abend-Brod*. Yet there are in Japan many thousands of poor mountaineers, who are glad if their little

fields produce barley, millet, and buckwheat instead of rice, and with whom the latter is an article of luxury falling only to the lot of invalids, little children, and weak old people, and but rarely to that of healthy adults.

Various kinds of millet, buckwheat, barley and wheat, form, as we have already intimated, substitutes for rice, and are used in the form of groats, while bread was unknown and is even yet not very common. Among the starch-furnishing tubers, the imo or root-tubers of the *Colocasia esculenta* play, as among the South Sea islanders, the most important part; then follow a series of others, as sweet potatoes, yams, common potatoes, and various others, among them the rhizoma of the lotus-flower and young bamboo-shoots. Dwarf and long beans, peas and dolichos-beans are a good deal cultivated, though like various other vegetables they are much less important than two plants, which the Japanese can hardly do without. These are long white radishes or daikon, which, cut into pieces and pickled in salt, are served at almost every meal, and the beautiful dark violet fruit of the nasu or egg-plant (*Solanum melongena*), which are partly cooked fresh in soup, and are partly also salted and used instead of daikon. For soups particularly, excellent fungi (*Agaricus* sp.) are esteemed.

The country produces many sorts of fruit, though but few that accord with our taste. The commonest is the persimmon (*Diospyros kaki* Thbg.), a handsome, brilliant orange-yellow fruit of the size of an apple, with which the large trees are laden in autumn, frequently even after the fall of their leaves. We may further mention magnificent looking pears of a faint, watery flavour, scarce and insignificant apples and plums, sourish grapes, peaches and apricots with little aroma, walnuts and chestnuts, besides the excellent mandarin oranges of the warm southern tracts of the country, and several other kinds of fruit, as the biwa or fruit of the *Eriobotrya japonica* Thbg.¹

Milk, cheese and butter are wanting; eggs, on the other hand, have some share in the diet of the Japanese, though not of the common people. By far the most important animal nutriment is furnished by the sea, with its wealth of fish, crustacea and molluscs. Ducks and game, especially pheasants, and, with the exception of dogs, all the larger mammals, apes, badgers and bears included, are eaten. The consumption of beef is increasing every year.

The Orientals of the Mediterranean countries take their food with the right hand from a large dish placed on a round table about which they sit. In Japan each person has his own separate portion set before him, as in a restaurant, upon a little table or tray. Kneeling upon the mats, he takes the little lacquered wooden bowl with the soup and lifts it to his mouth for the purpose of

¹ Full accounts of these and of the agricultural products generally will be found in the second volume of this work.

drinking from it, while the solid food is carried to the mouth by two chopsticks, which he holds between the fingers of the right hand and moves so dexterously as to make a fork with them. Besides the soup, the little table usually contains a small porcelain bowl heaped up with boiled rice, and several little porcelain plates with the relishes, viz. : fish, radishes, imo, or their equivalent. A small teapot, with a porcelain saucer serving as a cup, is seldom omitted. A servant kneels at a short distance before the clean pan of boiled rice, ready to replenish the bowls as they are held out now by one and now by another. A weak infusion of green tea, or simply warm water, is as a rule used as a drink at the conclusion of the meal. During journeys and on festivals they indulge in a cup of rice-beer, or sake, which is the favourite drink for the higher classes. The wife eats together with the female members of the household in a separate apartment, and only in the evening do all the members of the family meet around the dim lamplight.

The three stimulants, which are equally popular with all classes in Japan, are cha (tea), sake (rice-beer) and tabako (tobacco); all these are produced in superfluity by the country, and are consumed in large quantities. Green tea—black tea has not as yet been seen at all—is drunk as a weak infusion, without addition of any kind. One easily learns to like it, and finds it, especially in travelling, exceedingly refreshing and stimulating. It is a drink which is at once served to the new comer whether he pays a visit, enters a shop, or takes his seat on the bench or verandah of a public house. The sake appears to us less agreeable. It is drunk, as a rule, warm from lacquered or porcelain cups, and easily intoxicates, especially with the natives, not so much from the alcohol it contains, which is but little, as from the injurious fusel oil in it. Accordingly we very frequently see people exhilarated or intoxicated by sake. His natural reserve and good humour then not unfrequently fail the Japanese, particularly towards foreigners, to whom he exhibits his dislike. Thus it was dangerous and unadvisable to go near the soldiers in Tōkiō on Wednesday or Sunday afternoons, when they had leave, and often wandered more or less drunk in the temple-parks of Shiba, Asakasa and Uyeno.¹ Sake-drinking is so popular that Pumpelly says that the ruling vice is undoubtedly drunkenness.

Tobacco, which as I have already pointed out (at p. 311) was brought to Nagasaki by the Portuguese at the beginning of the 17th century, soon became highly popular with young and old, high and low. Even among women non-smokers form the rare exception. It is smoked in small pipes of from 15 to 25 centimetres in length, the head and mouthpiece being made of brass or silver, while the connecting stem consists of bamboo cane. The whole

¹ The only occasion upon which I was insulted during my stay in Japan was by a drunken soldier.

vividly reminds us in shape of a *Clausilia*, which is therefore very justly called *Kiseru-gai*, pipe-snail. The rectangular bent head is smaller than a thimble. The sweetish herb is cut fine, like Turkish tobacco, and thrust into the pipe in loose little balls; there is only enough for one or perhaps two whiffs, the smoke of which is swallowed and expelled again through the nostrils.¹ The pipe is then emptied by knocking it on the *hibachi*, or *tabako-bon*, is refilled, lit, and its smoke imbibed. Pipe and tobacco-pouch are the constant companions of the Japanese. To smoking he devotes a considerable portion of his day, beginning, interrupting, and ending his labours with it. Politeness therefore everywhere requires that on his arrival, not merely a cup of tea, but also first of all the *hibachi*, should be set before a guest to light his pipe at.

4. THE FAMILY.² ADOPTION, TRAINING, AND EDUCATION. PARTICULAR PLEASURES. THEATRES, GEISHAS AND YOSHIWARAS. FUNERALS.

Stability is the most noteworthy characteristic of the Japanese family. Its head enjoyed the same extensive rights as the *pater familias* in ancient Rome—an unlimited power over the person and property of his children. Abuse of these rights was as a rule prevented by natural affection and very influential customs. With this extensive power in the supreme head of the family there was combined of course, on the other side, a vast responsibility for all the acts of his subordinates. This was mitigated by the further right of expelling members of the family and introducing strangers into it. In this way the Japanese family lost much of its natural character, and assumed the aspect of a corporation.

Adoption (*moraikko* or *yôshi-ni suru koto*) or reception into the position of a child, is an old custom, widely spread and much practised in Eastern Asia. While the Roman took adopted sons to enlarge his family, the Japanese adopted them to preserve it. With the latter, however, the practice became general, and took deep hold in the life of the whole people, only on the development of feudalism and of the *Shôgunate*. Adoption had two objects; a material and a religious one. The material, which we may also describe as the feudal object, and which doubtless in most cases was the moving cause, was to secure to the family its hereditary rights, which were connected with military services, or at least with the possibility of being able to render them. For this reason *Yoritomo* introduced the law of male succession as applying to the *Samurai* class. In earlier times there was no limitation of the

¹ The Japanese therefore does not say, "I smoke," but "I drink tobacco," "*tobako o nom wu*," just as was formerly said in Germany when tobacco was introduced.

² Surnames or family names were in early times very usual. They precede the personal names, and until modern times were, in the case of well-known personages, less used, as history shows us than their personal names.

succession to male descendants, the history of Japan exhibiting nine reigning empresses.

The adopted son in many cases assumed the name of his adoptive father, and for the most part became also his son-in-law, if the latter had a daughter. So long as he was a minor (under 15 years) both sets of parents cared for his bringing up. As a rule he was taken from the circle of his relatives, and the step served as a means of providing for younger sons, although there was no regulation on this subject.

The religious object of the maintenance of the family by adoption was to secure the continuance of the sacrifices instituted to ancestors. In more aristocratic families provision was made for this sacred duty, even when they were deprived of their possessions by way of punishment, as we have seen in the case of the Hoshina family (p. 360). In China, as in Japan, there was and is, owing to ancestor worship, hardly any greater misfortune to the father of a family than to have no son, since there was then no one to offer sacrifices to ancestors, so that they might not hunger and thirst for ever in the lower world.

Apart from this religious aspect, the main advantage of adoption was, that when elderly people wished to go into retirement, they, and any daughters they might have, found in the adopted son a natural support, for the duties of the adopted son were the same as those of a natural child. Among its disadvantages was that it favoured open concubinage, as the children of the head of the family by concubines enjoyed the same rights as those springing from lawful marriage.¹ It is alleged as a further disadvantage of adoption, that it made a young man whose inheritance was thus assured, negligent, and that he did not labour to improve himself with the same energy and devotion as those who were conscious that their advancement depended entirely upon their education. It has been often enough pointed out in the historical portion of this work that adoption frequently took place in connection with abdication at a youthful age. Many a man, even in the humbler position of the ordinary Samurai, believed that he had sufficiently performed his duties as head of a family, if he had provided in one way or another a successor, and so secured the inheritance, and he then wasted the best portion of his life. Finally, we must remark that base-minded people frequently adopted girls at a tender age in order to train them in the arts of the courtesan, and afterwards to use them as such.

Adoption had likewise its ludicrous aspects, among which we may mention the provision of Iyeyasu, that the adoptive father should be at least 15 years old, as well as the rule of etiquette which

¹ Adoption in conjunction with this institution sufficiently explains the great antiquity of many families, particularly that of the Mikado, of which the Japanese are unjustifiably proud.

required that a child as heir and representative of the family should appear upon occasions of ceremony in the dress of an adult.

By the abolition of feudalism and the great reduction of family inheritances the importance of adoption was also considerably diminished. The view is more and more prevailing that the practice is not only unsuitable to modern times and changed circumstances, but that it is better to let it die out gradually, instead of suddenly abolishing it, as so many other things have been abolished, by a harsh prohibition.

In Japan, *marriage* was formerly only a civil contract, with which, at all events in the lower classes, Church and State did not concern themselves, while with the Kuge and Daimiôs it could only be effected with the assent of the central government in Yedo.¹ It was usually preceded by a ceremonious betrothal, which was more binding than such a ceremony is now regarded by American law. A marriage agent (*nakôdo*), commissioned by the parents of the bridegroom or the bride, brought about a meeting or *mi-ai* (from *miru*, "see," and *au*, "meet") of the two families in the theatre or in a tea-house. The young people having thus made each other's acquaintance, if they liked each other, presents were exchanged and the betrothal was thus sealed. Afterwards came the conducting of the bride to the house of the bridegroom, and thus the commencement of the marriage.²

We must not judge of the position which the Japanese wife holds by our ordinary standard, for it has been one of the most beneficent results of Christianity, to secure to the wife an education and position equal to that of the husband; it is only in Christian marriage that she becomes entitled to eat at the same table with her husband, and to share all the anxieties and enjoyments of his life; it is only here that she appears as his equal and companion.

Neither Confucius nor Buddha assigns to the wife a position of honour. According to the latter she is in all respects inferior to her husband, and can only wish that on her re-entry into life she may appear as a man; according to the former she has only duties, but no rights. These *sanjô* (three great duties), which in Japan also were, in accordance with the social principles of the Chinese philosopher, impressed upon every woman from her youth up, were and are, as already mentioned, obedience to her father (and mother), her husband, and her eldest son, according as she was unmarried, a wife, or a widow. The husband had full rights over the person and property of his wife; and concubinage was permitted to him, while he might punish with death the adultery of his wife. In seven

¹ I follow here, in the main, Gebauer's admirable essay on the subject in the 13th No. of the *Mittheilungen der deutschen ostasiatischen Gesellschaft*.

² The husband had to be 16, and the wife 13 years of age, in order to marry. No one was permitted to marry out of his own rank; the Samurai could not marry a Heimin, nor the Heimin an Eta.

cases he had the right of divorce, which he exercised by simply sending back his partner to her parents. The grounds of divorce as established by Confucius were : disobedience of the wife to her husband's parents, barrenness, loose language and drunkenness, jealousy, foul diseases, theft and—talkativeness. This important right was however seldom exercised, especially when the marriage was blessed with children. Training and public opinion required that the wife should then in particular be treated with kindness and respect. Hence the Japanese wife was and is among all the women of Asiatic peoples the freest and most respected, and even plays an honourable part in the national history. Her mission is to enliven her husband's existence. This she endeavours to do by her cheerful temper, by great cleanliness in dress and in the house, is a careful housekeeper and a loving, tender mother, and in this position finds her true dignity. Custom required of her, until recently, to abandon altogether any attempt to please the rest of the world, by shaving her eyebrows and blackening her teeth, for according to Iyeyasu the direction of her duties is inward, while the tasks of the man are directed outward.

The Japanese wife is the first servant of the household. Even at the wedding feast she must humbly present the dishes to her husband. Man and wife do not take their meals in each other's company, nor do they appear together in social life, at all events not those belonging to the higher classes. In the house however she is *Nio-bo*, "the lady of the gynæceum;" *Oku-sama*, "mistress interior;" but above all, *O Kami-san*, "the honourable mistress," as she is usually addressed. As such moreover she occupies a position above the *Mekake*, or concubines, and their children.

Polygamy was in ancient Japan a widely-prevailing practice. Iyeyasu in his laws concedes to the Mikado the right of taking a dozen concubines, while the *Daimiôs* and *Hatamoto* are allowed eight, and the ordinary *Samurai* two. But they only availed themselves of this right in rare cases, and then it would probably happen that the wife, who suckled her children herself and continued to do so for a long period, and in consequence became old comparatively early, would herself bring a *mekake* to her husband.

Their acquaintance with European laws and customs and the lofty conceptions of marriage and family life entertained by European civilization, has aroused in the more cultivated classes of Japan a lively desire to raise their own standard of conjugal life. Accordingly as early as 1870 an edict was published, by which official notice and approbation were made necessary preliminaries to every matrimonial contract. In the following year the class-limitations upon freedom of marriage were abolished, and two years later the right of suing for a divorce was conceded to the wife. But example has already done more than even laws to elevate the position of woman. Ministers and other high officials have for some years appeared in society in company with their wives, even

in European circles, and the latter observe with surprise and admiration the "ladylike behaviour," the elegance and refinement, and the free and natural demeanour of the Japanese ladies.

Japanese mothers have as a rule abundant nourishment for their children, and suckle them until they are from two to five years old, and wean themselves of their own accord. Like a lamb in the flock, a little urchin will suddenly leave his playmates and hasten to his mother close at hand, and then, standing or kneeling, will take a few hearty pulls at her breast, which is never refused him. This long-continued suckling may be partly accounted for by the absence of any other suitable food for children in the shape of the milk of animals.

Many children die at an early age, not so much from want of devotion as from insufficient knowledge on the part of their parents. Their clothing resembles that of adults in make and fashion, though the little ones enjoy much greater freedom of movement.

Kissing and handshaking as expressions of affection are unknown in the Japanese as in the Polynesian family. Nevertheless Alcock has justly called Japan the Paradise of children. Their training is conducted with great mildness and gentleness. Violent expressions of passion and corporal chastisement are interdicted by public opinion. In this point no nation has carried things so far as the Japanese. Here the parents themselves become children and amuse themselves just as much with spinning tops, flying kites, etc. It is a pretty sight on sunny afternoons at the time when some favourite plant is in full bloom in beautifully-situated tea-houses or temples, to see crowds of people in holiday attire going out in family parties to enjoy the beautiful sight. Peace and happiness are reflected in the faces of young and old; and the parents are ceaselessly engaged in amusing their children, in sharing in their games, providing them with sweetmeats, while most of them content themselves with a weak infusion of tea or a cup of warm water and their little pipe.

Although children are regarded in Japan, as among most peoples, as a special favour of heaven, and this feeling finds expression in the proverb, "Richigi mono ko takusan" (Honest people have many children), yet large families are not numerous, and the average number of children is only three.¹

The new-born child receives its name on the seventh day. When it is thirty days old, its head is shaved. It is washed and gaily dressed and then carried by its mother to the temple, where she offers some coins and renders thanks to the family god. It is then taken round to the nearest relatives, who give the mother various

¹ We must confine ourselves here to the mention of this fact. Details upon this subject, as well as upon birth, diseases, and other things falling specially within the sphere of medical observation, may be found in the interesting work of Dr. A. Wernich, *Geographisch-medicinische Studien*. Berlin, 1878.

symbolic gifts for it. When it is four months old, a new section of its life is solemnly commenced. It is now attired after the same fashion as adults, and, if it is the son of a Samurai, receives from its sponsor a dress of ceremony, which is ornamented with pictures of cranes and tortoises as symbols of a long life. A further festival is associated with the 11th day of the 11th month, from which date only a few places in the child's head are shaved, while elsewhere the hair is allowed to grow. Finally when the boy has attained the age of fifteen, he becomes a man, changes his name and the fashion of his hair, and is considered old enough to marry.

Reverence towards parents is regarded as the first duty of children. Many sayings of famous men and familiar proverbs give expression to it. "Ko-hitsuji wa hisamadzuite chichi wo nomu," "the lamb drinks its milk kneeling," or in other words, even the animal respects its parents; or again: "Karasu wa oya no on wo mukuyu," (even) "the raven repays the kindnesses of its parents," are among these. The old Japanese law moreover ordains a punishment of 100 days' imprisonment of any child who should marry during the legal period of mourning for parent or grand-parent; and of a year's imprisonment of any child who should take no part at all in the mourning. There are numerous instances of a man's selling his daughter for some years to a house of pleasure in order to secure the means for burying his father respectably; and the story of the Forty-seven Rōnin supplies an instance in which a maiden, with the consent of her parents and her lover, sold herself for three years to a public brothel to provide her lover with travelling expenses that he might join his fellow-conspirators in Sakai and perform his feudal duty—a journey which, as they all knew, had for its object the avenging of his lord, the Daimiō of Akō, and would certainly result in his own death. The Japanese maiden yields herself to men with the consent or at the instigation of her parents but not otherwise. It is only amongst base-minded parents however that children are thus sold, and it is just as much forbidden by the tone of respectable society in Japan as it is with us.

The Japanese maiden (*musme*) has received a good education when she can read and write the Hiragana, do a sum, and has thoroughly learned the tasks and duties appropriate to her sex. Besides this she is taught to play the Samisen and probably the Koto¹ also, as well as domestic management, and the art of tastefully arranging flowers in vases, on which there are special illustrated treatises. At all ages and in every condition much import-

¹ The Samisen, or three-stringed guitar, is the commonest of all musical instruments, and nearly every girl learns to play it. It is only in better houses that the old thirteen-stringed Koto, a kind of zither, which is played lying down, is to be found. Its tones are much more pleasing and harmonious, but it is very much more difficult to play. The Biwa, a mandoline with four strings, is generally played by old people.

ance is attached to great cleanliness and a cheerful, friendly demeanour, especially when the girl goes into service amongst strangers. The serving *nēsan* (the Japanese waiting-girl) receives the guest on his arrival in the *Yadoya* or *Chaya* with laughter, playfulness and jest. She hastens with a friendly "*tadaima*" (at once) to fulfil any wish expressed to her, and seems never to become either sulky or weary. Her morals, although not guided by any ideal or high religious principle, are very much better than could be expected from the evil repute she had formerly acquired through her strikingly trusting and childish naïve demeanour to superficially judging foreigners. She is guided by the lessons she has received upon proper behaviour, but principally by blind obedience to her parents and a wholesome fear of their disapprobation.

The relation of the master and mistress (*shujin, danna*) to the servants (*kodzukai*) reminds one of the state of things in this respect in the good old times of Germany. The *kodzukai* rigidly pays due reverence when he comes into or leaves the presence of his *danna-san*, but otherwise feels quite at home as a member of the family, and is treated as such. Thus he moves freely about the house, not unfrequently takes part in the conversation, and is applauded when he is able to contribute a pertinent observation or to interpose an amusing witticism. Master and servant should suit each other like fish and water, says *Iyeyasu* in his 70th Law.

The school-training of the Japanese boy begins on the 6th day of the 6th month of his sixth year, on which he receives his first lesson in calligraphy with all the observances of etiquette and solemnity which have always characterized the nation in such matters. Provided with the necessary writing materials, consisting of an ink-box (*sumi-ire* or *suzuri-bako*), with a piece of ink (*sumi*), a brush (*fude*) of the thickness of a little finger, an ink-dish (*suzuri*) and usually also a little vessel for holding water, as well as some paper (*kami*), the new pupil is introduced to his teacher, who makes before him on a large scale the simple and more complex signs one after the other, and with unwearied patience and unvarying kindness shows him how to copy them. It is not often that the pupil displays any want of attention or earnestness. When he has made repeatedly the same sign, completely covered the paper with hieroglyphics and thoroughly mastered one form, he goes on to the second and so on. Thus he gradually acquires, in addition to the easy native syllabic writing, a stock of Chinese word-signs. On the lowest calculation he must master in six or eight years about a thousand. Quicker pupils under competent teachers learn as many as three or four thousand, and scholars as many as ten thousand, and even more.

In the nursery, intelligence and imagination are nourished and excited by fables and tales of heroes. In particular, the wondrous

narratives of the life of Kuûkai (Kôbô Daishi) play a conspicuous part. The children are told with much pathos how this great scholar and saint scared away evil spirits by writing in the air a verse from the Buddhist Scriptures so cleverly that a golden crown grew round every letter ; or how with mouth, feet, and hands he suddenly restored five obliterated lines of the famous caligrapher Ô-gi-shi, with many other achievements. So too the infinite patience of Ono-no-Tôfu, who took example by the frog which persevered in its attempts to climb upon a willow branch, and many other legends, are held up to the youthful mind as examples upon which to form its ideals. When the pupil has sufficiently mastered the greater difficulties in reading and producing the Chinese ideograms, a whole series of works are read in a kind of chant partly by the individual pupils, partly in a loud chorus. These works are enumerated in the little volume, entitled "An Outline History of Japanese Education," published by Appleton, in New York, in 1876. Among them were Kôkiô (Chinese Hsiao-king), the Book of Filial Piety ; Chiuyô (Chung-yung), the Golden Mean, which treats of social intercourse ; the Books of Confucius and Mencius, historical treatises, and others.

There was only one standard of learning, and he who had attained it and proved this in a formal examination, was together with the teacher who had so well trained him, held in great esteem. Just as there are still in Europe many who cannot conceive a thorough education without Greece and Rome, so, though on far more adequate reasons, the knowledge of the Chinese language and philosophy was in the eyes of the Japanese the Alpha and Omega of all thorough education. But this philosophy, even in the more liberal shape in which it was taught by Mencius, sprung throughout from a narrow feudalism, and formed a useful instrument for its preservation and furtherance. Japanese education formed respectful sons, docile pupils, obedient subjects, skilled caligraphers, enthusiastic admirers of antiquity, narrow-minded worshippers of the philosophy of Confucius ; it did not arouse the intelligence, it left the individual conscience entirely under the control of custom, it kindled no religious thought or feelings, but encouraged the narrowest spirit of caste and clannishness. It was an education which taught the young Samurai to be an obedient, loyal subject to his feudal lord, but contributed little to develop a general sense of justice or to ennoble the feelings ; an education which allowed him, in utter disregard of universal human rights and duties, to try his sword on the first wanderer he encountered outside the limits of his clan, or in overbearing quarrelsomeness to stop a rival's way. Accordingly, of all the innovations made during the Meiji period, those are justly regarded as the most important which emanated from the Department of Education, and had in view a better and more liberal training of the Japanese youth. At present nearly two million children are trained in more

than fifty thousand schools, in a different spirit and according to Western principles and books—principles arising from the spirit of Christianity and pervaded by Christian morality. And this great blessing is enjoyed by the child of the Heimin as well as that of Samurai; for the school is open to every child irrespective of the social position of the father, in return for the modest payment of from 9*d.* to 3*s.* per month, according to the grade of the establishment.

Modern Japanese schools however, which devote themselves almost exclusively to practical aims, are still wanting in two very important factors of what, according to our ideas, constitutes a solid and at the same time a liberal education. One of these is chiefly concerned with the training of the mind, the other with the development of the body: the former being instruction in religion and singing; the latter, gymnastic training. In earlier times, when gymnastic exercises outside the schools, such as kite-flying, the game of war, fencing, were very common among the male youth of Japan, and much more popular than they now are, circumstances were more favourable to bodily development. At the present time however the introduction of gymnastics would be not only a counterpoise to the evil consequences of a sedentary life, and a means of developing and strengthening the body, but also a matter of great moral importance. It is necessary that Japanese parents and educators should endeavour to implant in the young a taste for the healthy and vigorous physical movements, which are offered in abundance by gymnastics and by the “athletic sports” of the English, that starting from a better religious basis, which we heartily wish for a people with whom we have so much sympathy, they may gradually bring up a youthful generation, which though it may perhaps be less docile than the present, shall on the other hand be physically and mentally more fresh and vigorous, and may strive after loftier ideals.

There are no social amusements that can be compared with our evening entertainments, concerts, or balls. When the grown-up male youth of the towns wish to enjoy the pleasures of society they celebrate orgies in bad company.¹

¹ There are in Japan a considerable number of common children's games, some of them very ingenious and exciting. Among those of which adults of all classes, not excepting the common labourers, are very fond, the most conspicuous at present are Shōgi, or chess, and Go, a kind of draught board and game of siege. Both are of Chinese origin. Japanese chess is much more complicated and elaborate than ours, having 40 pieces and 81 squares. The first are blocks distinguished by their different sizes and inscriptions. Under certain conditions they are changed, receiving together with fresh inscriptions new and more extensive powers. Go is played on a draught board with 18 spaces in a square. Of the round pieces there are 80 white and as many black. The player loses a piece or group of pieces when his opponent has so surrounded them that there is no way of exit for them.

Singing and instrumental music are arts which, in Japan, as throughout the East, are as a rule practised only by girls. Those who engage in them professionally are called Geishas. In point of respectability they occupy a middle position among the three lower professional classes which serve the purposes of pleasure, viz. the Yakusha, Geisha, and Jôrô (actors, dancing girls, and women of pleasure). The theatre (Shibai) and houses of pleasure (Jôrôya) in which they are to be found, are privileged establishments, by means of which the large towns provide a considerable portion of their revenue, as every person here receiving a licence has to pay a heavy tax.

The upper classes in Japan do not allow their daughters to visit the theatre, because the pieces which are played there are justly considered demoralizing. Among the people however, good actors and theatrical representations are very popular. The whole family, provided with rice-bread, teapot and sweetmeats, for the performance lasts the entire day, betake themselves to the temple of the Muses and bestow rapturous applause on the plain unvarnished reproductions of the most intimate family and yoshiwara life, and in particular of tales of murder. Strolling players and acrobats frequently put up their temporary stages in open spaces, and by fantastic noisy processions, fireworks, etc., invite neighbouring places to attend their performances.

The Geishas are the Japanese representatives not only of the nine Muses, but also of some other goddesses, and in particular of Hebe. Sometimes they are invited to a respectable tea-house to furnish entertainment with their dancing, nasal singing, samisen-playing and pantomime, for one or more well-to-do citizens and their families, who have come here to spend a day of pleasure; sometimes the like services are demanded of them in a Jôrôya, or even in a private house. On the great temple festivals they have to march in the procession in their best attire as festal maidens, and to serve the dishes at the feast given by some high official.¹

Usually of low origin like the prostitutes, and frequently like them, abandoned orphans, they come, as a rule while young, by purchase into the possession of avaricious proprietors, who give them what is, according to Japanese notions, a good education. Many of them are considered beautiful and witty. In pantomime they not unfrequently develop great histrionic talent, which fascinates even foreigners, though to appreciate their musical performances an Oriental taste is required. Of their morals it is sufficient to say that as a rule they are always ready, with the consent of their masters, to leave the company to which they belong, and to let themselves out by a contract for a month or more to a native or foreigner.

¹ The Geishas play therefore much the same part as the Ghawâzi (sing. Ghâzie) in Egypt (see *inter alios*, Kluntzinger).

Yoshiwaras is the name frequently given by foreigners to the quarters, and also to the individual houses, dedicated to Aphrodite, and which are for the most part comparatively large and handsome. Strictly speaking the name, which signifies "rush-field," only applies to a quarter of ill-fame in Tôkiô. In the opinion of all those who are actually acquainted with the facts relating to this subject, the fallen woman in Japan is never found to occupy so low a position as in our great towns. On the contrary, the inmates of the Yoshiwaras are not despised but pitied by the better classes of society; and indeed it is known that they are pursuing their degraded avocation from no fault or inclination of their own, but at the will of their parents or nearest relatives, who have for the most part sold them in their early years to the proprietors of houses of public resort, where they are trained in various branches, but more particularly in the arts of Aspasia, until the time arrives when they are fit to turn them to account as slaves of their masters.

Like Phallus-worship, which, together with its symbols formerly so numerous and widely spread, has, as a result of foreign influence, been entirely banished since the beginning of the reign of Meiji (Enlightened rule), belonged to Shintôism, so also does this ancestor-worship appear at least to have judged the Yoshiwaras very mildly, if not to have directly favoured them. Otherwise how could we explain the fact that even to-day the road to the most sacred shrine in the country, the Temple of the sun-goddess Tenshō Daijin at Yamada in Ise, leads through a Yoshiwara celebrated in the whole country? But degenerate Buddhism allowed such license, as in Niigata, where the Teramachi (Street of Temples) exhibits on the one side a series of Buddha-temples, and on the other the houses of pleasure. In Sendai, moreover, the latter are situated in the main street of the town, close to the post and telegraph offices and the best shops, as though they were equally respectable with them. In the autumn of 1874, the author had to content himself there with a third-rate Yadoya in order to secure a respectable hostelry.

All this, and much besides, indicates that the Japanese still occupy in these matters a very low grade of moral development, and judge of sexual excesses very leniently from their sensual standpoint, although parents exhort their grown-up sons to continence in these things, and a proverb says "Beware of beautiful women as of cayenne pepper," yet for the most part these exhortations are inspired not by any lofty moral motive, but only by the fear of widely spread contagious diseases, which finds expression in another proverb to this effect: "Pleasure is the seed of trouble."

The funeral ceremony among the Japanese consists as a rule, of interment (Dosô) in a cemetery near some Buddha-temple, occasionally of cremation (Kuwa-sô). In the first case the coffin (kuwan

or hitsugi) in which the deceased is laid twenty-four hours after death, is a heavy chest of white wood, which receives the corpse in a sitting position, with the head resting on a pillow filled with tea leaves. The deceased is so laid and buried that the head is directed to the north, the feet to the south. Among Shintôists and certain Buddhist sects it is usual to dress the corpse in a white cloth, for which other Buddhist sects substitute a shroud made of paper and covered with written characters of the Pali language. The coffin is covered with a white cloth and borne by relays of men upon their shoulders, while the mourners follow in official and mourning dress. The burial ceremonies differ even in the house of mourning and at the grave, being solemn on the part of the priests and the nearest friends of the deceased, while the demeanour of the rest of the public displays merely curiosity and not sympathy. Over the enclosed grave is placed a simple memorial stone with the name and date of decease of the departed, and an ihai, or small wooden tablet, likewise marked with the name and date of death, is placed on the butsu-dan, or altar of the household idol. In the case of a person of rank a sakaki (*Cleyera japonica*) and a sakura (*Prunus pseudocerasus*) are also planted near, but in other cases it suffices to place a section of bamboo-cane as a vase, in which are branches of flowering or evergreen plants. The third and ninth months of every year are set apart for visits to the graves; vases are then filled with fresh branches, and at home the family recall the memory of their ancestors, to whom certain offerings are made.

Formerly cremation was generally practised only by the Monto sect, but in recent times it has extended itself to other confessions, being favoured by the priests, who, after they had been for the most part reduced by the present government to doles, were glad to find in it a new source of revenue. The first known instance of cremation, that of the famous priest Dôsho about the year 700, was performed by his disciples in accordance with his directions. The practice very speedily found favour with others, even in the highest circles. From the year 1654 however, no emperor has been dealt with in this way.

The Japanese arrangements for cremation are more simple than those in use at Gotha, and their cost is small. The process is effected in three classes for $\frac{3}{4}$, $1\frac{1}{2}$ and $1\frac{3}{4}$ dollars respectively. After the process, the relatives of the deceased collect his ashes and the remnants of his bones and deposit them in an urn.¹

¹ Further details upon this subject may be found in Doenitz's dissertation in the 10th No. of the *Mittheilungen der deutschen Gesellschaft*: "Ueber Leichenverbrennung in Japan."

5. CALENDAR AND NATIONAL FESTIVALS. SEXAGESIMAL CYCLE AND NEN-GÔ. THE GO-SEKKU, ESPECIALLY THE NEW YEAR, AND FESTIVALS OF FLOWERS AND THE MATSURI.

By way of introduction to the chapter on the Japanese Festivals, it will be well to give a brief account of the Calendar (*koyomi* or *reki*) as it was formerly in universal use. Until the year 1873 the Chinese reckoning was employed in Japan, having been introduced in 602 A.D. by a Buddhist priest from Kudara. By the same route some hundred years later the first clepsydra or water-clock (Chinese, *rokoku*, Jap. *midzu-doke*), made its way into the country as a more exact measurer of time; automatic striking-clocks only came over from China between 1592 and 1595. The Chinese had learnt their use under the Ming Dynasty, from the Italian Father Matteo Ricci.¹

The civil year (*toshi*, *nen*) of the Japanese was, as in China, a lunar year of 12 months (*tsuki*) of 29 and 30 days alternately, and accordingly of 354 or 355 days (*nichi*, *hi*).² Long before Meton (432 B.C.), the Chinese—probably through early intercourse with the Chaldeans—were acquainted with the lunar cycle, and knew that the lunar year was considerably behind the solar year. In order to bring the two into harmony, they added to the 2nd, 5th, 8th, 11th, 13th, 16th, and 19th year of every lunar cycle an intercalary month of varying length. This bore in Japan the name of *uro-tsuki* and followed the second month of the year, which was then reckoned twice over, as *uro-nigatsu*, *i.e.* supernumerary second month. The Japanese husbandman besides the great seasons, distinguishes twenty-four lesser ones of 15 days each, which he arrives, at by bisecting the months, calling them *seki* (change of weather), and employing them to regulate his tasks.

As the Chinese still employ, so the Japanese until recently employed, for their chronology cycles of 60 years, of which 44 ended in the year 3 A.D., and the 75th in 1803. These sexagesimal cycles are divided into five series of twelve years each and into six of ten years each. In the former the particular years are named after the twelve animals of the Chinese zodiac;

¹ For fuller particulars of this important personage see v. Richthofen's *China*, pp. 654-6.

² New Year's day fell at the new moon before the spring equinox, *i.e.* in February or March. When the Japanese government in 1872 proclaimed the substitution of the Gregorian calendar for the old lunar year, the docile Japanese, whose attention was called by the newspapers and authorities to the advantages of the change, quietly adopted it. Only the Chinese in Yokohama were discontented, and gave expression to their dissatisfaction in a document, one day found posted on one of the government buildings, in which the Japanese were reproached with having become completely enslaved to the foreign devils.

the rat, ox, tiger, hare, dragon, serpent, horse, goat, ape, cock, dog, boar, in Japanese *Ne, ushi, tora, u* (*usagi*), *tatsu, mi, mma, hitsuji, saru, tori, inu, i*.¹ The years of the ten series are named after the five elements of the Chinese: wood, fire, earth, metal and water, in Japanese, *ki, hi, tsuchi, kane* and *midzu*, each of which is reckoned twice over, by the Chinese as male and female principles (*ya* and *me*), by the Japanese as *ye* (*ani*) and *to* (*otôto*), *i.e.* elder and younger brother. They distinguish accordingly (with special Chinese signs) *ki-no-ye*, wood in general, and *ki-no-to*, worked wood, *hi-no-ye*, natural fire (of the sun, volcanoes), and *hi-no-to*, domestic fire; *tsuchi-no-ye*, raw earth, and *tsuchi-no-to*, manufactured earth; *ka-no-ye*, native metal, and *ka-no-to*, worked metal; *midzu-no-ye*, running water, and *midzu-no-to*, stagnant water. Each year bears the name of an animal in the one series and of an element in the other. If we combine the series given by both modes of division, the same combinations will take sixty years to repeat themselves. The Chinese and Japanese in order to ascertain the special names of a year make use of a diagram² in the form of the dial-plate of a watch with two concentric circular divisions, each of sixty equal parts, the outer of which repeats six times the names of the elements in their double meanings, and the inner repeats five times the names of the zodiacal series, in such a way that *e.g.* at the beginning the rat and natural wood (*ki-no-ye*), in the second place the ox and manufactured wood, in the last or sixtieth place the boar and stagnant water (*midzu-no-to*) stand under each other.

The present, seventy-fifth sexagesimal cycle began with the year 1864,³ which therefore bears the name of *ki-no-ye-ne-no-toshi*, "year of the wood and the rat." In ordinary life, however, it is more usual to call the year only after the zodiacal series, or *ne-no-toshi* or *ne-doshi*, year of the rat. Thus *e.g.* 1874 was called: *ko toshi-wa inu-no-toshi de-gozarimasu*; this year is the year of the dog. This year (1880) accordingly Japan is living in the year of the dragon.

To make the subject easily intelligible we here append a diagram which Hoffmann introduces in his Japanese grammar (p. 158) as the—

¹ This Chinese zodiac is frequently found under the roof of pagodas or of Buddhist temples, represented in high relief, three animals upon a side.

² Called *nen-dai-ki* or *nen-dai-rokuju-dzu*, *i.e.* picture of the sixty-year table, from *nen* = year, *dai* = period, *rokuju* = sixty, and *dzu* = picture, plan.

³ The commencement of the first was in the year 2637 B.C.

SYNOPSIS OF THE SEXAGENARY CYCLE.

| Names of the constellations in the Chino-Japanese Zodiac. | Wood ki | | Fire hi | | Earth tsuchi | | Metal kane | | Water midzu | | Names of our Zodiac corres- ponding to the Chinese. |
|--|------------|----|------------|----|-----------------|----|---------------|----|----------------|----|--|
| | no ye | to | no ye | to | no ye | to | no ye | to | no ye | to | |
| Rat, ne | 1 | | 13 | | 25 | | 37 | | 49 | | Aries |
| Ox, ushi | | 2 | | 14 | | 26 | | 38 | | 50 | Taurus |
| Tiger, tora | 51 | | 3 | | 15 | | 27 | | 39 | | Gemini |
| Hare, u (usagi) | | 52 | | 4 | | 16 | | 28 | | 40 | Cancer |
| Dragon, tatsu | 41 | | 53 | | 5 | | 17 | | 29 | | Leo |
| Snake, mi | | 42 | | 54 | | 6 | | 18 | | 30 | Virgo |
| Horse, mma | 31 | | 43 | | 55 | | 7 | | 19 | | Libra |
| Goat, hitsuji | | 32 | | 44 | | 56 | | 8 | | 20 | Scorpio |
| Ape, saru | 21 | | 33 | | 45 | | 57 | | 9 | | Sagittarius |
| Cock, tori | | 22 | | 34 | | 46 | | 58 | | 10 | Capricorn |
| Dog, inu | 11 | | 23 | | 35 | | 47 | | 59 | | Aquarius |
| Boar, i | | 12 | | 24 | | 36 | | 48 | | 60 | Pisces |

The slight changes which I have introduced in the transliteration of Hoffmann's Chinese character and in some other respects will at least facilitate the understanding and application of this table. If we wish to know, *e.g.* the names of any year in the cycle, *e.g.* of the thirty-ninth, we look out the corresponding number in the table and then carry the eye upwards to the name in the decimal series and to the left to that in the duodecimal series, so that in the example in question we immediately find water (midzu-no-ye) in the former and tiger (tora) in the latter. If on the other hand we know the name of the year in the elementary series and the zodiacal series, we find what order it occupies in the cycle by carrying the eye downwards from the former till we come to the horizontal indication for the corresponding constellation. Moreover by the aid of the table it is easy to find the year of the Christian era corresponding to any year, supposing we also know in which sexagesimal cycle the latter is.

Besides the sixty-years cycle there is also current in China, as well as in Japan, another and more arbitrary division of the years into periods, which are reckoned from important historical events,

such as an accession, a great earthquake, a famine, etc. In the naming of these historical periods or *nen-gô* (*nen*, year ; *gô*, name) one or more of sixty-eight Chinese words specially appropriated to this purpose, such as peace, wisdom, happy reign, etc., are employed. This practice was introduced into Japan in 645 A.D. ; it was and still is a prerogative of the emperor, although the present emperor returned, after his accession, to the older and rational procedure, and prescribed that henceforth only one *nen-gô* shall be chosen for the entire reign of a Mikado. In the case of his own reign this is Meiji, *i.e.* "enlightened government," so that all the documents of the Japanese government of the present year (1880), in addition to other dates, must also bear the indication, "in the thirteenth year of Meiji" (see also p. 361).

For the individual months there are no special names ; they are denoted as *shô-guwatsu*, *ni-guwatsu*, *san-guwatsu* (pronounce *shô-gats*, *nigats*, *sangats*), etc., *i.e.* first, second, third months.¹

The Japanese have two kinds of public festivals, viz. the *Go-sekku* or five great secular festivals of the year, which are celebrated by the whole nation, and the *Matsuri* or temple-festivals in honour of particular saints, which are for the most part confined to one sect or other and to particular temples. The *Go-sekku* take place on the first, third, fifth, seventh and ninth day of the first, third, fifth, seventh and ninth months respectively and are therefore also called *shô-guwatsu-no-sekku*, *san-guwatsu-no-sekku*, *go-guwatsu-no-sekku*, *shichi-guwatsu-no-sekku* and *ku-guwatsu-no-sekku*. On the eleventh day of the eleventh month there is no popular festival nor is any temple-festival held during the month, because at this period, according to an old belief, the *kami* or *shintô-gods* of the country are all gathered in council in the province of *Idzumo*.

Of all the festivals of the year, that held on the first day of the first month, the *Gan-jitsu* (properly *guwan-jitsu*), or the foundation-day, stands pre-eminent in its extension and universality. At the New Year all labour ceases, even among the Chinese. Many, like the Boers in the Transvaal, celebrate the New Year for fourteen days ; but on the first three days of the *Sanga-nichi* everybody ceases working.

The approach of the festival is everywhere announced by outward and visible signs. As in North Germany the people decorate their doors at Whitsuntide with fresh May, and thus give expression to their rejoicing at the reawakening of nature, so does every Japanese, though it may be from different motives, adorn the entrance to his house with several of the favourite evergreens of

¹ For our present purposes this explanation of the old Japanese notation of time will suffice. Those who wish to study it, and the division of the day, more thoroughly, will find the necessary information in Siebold's *Archiv*, in Hoffmann's *Japanische Grammatik*, and in Bramsen's *Japanese Chronicle Tables*.

the country. In this kind of decoration, called shime-kazari, the most conspicuous plants are matsu (pines), take (bamboo-cane), urajiro in *Gleichenia glauca* (*Polypodium dichotomum* and *Pteris* species), and nanten (*Nandina domestica*). These plants have all a symbolic meaning. The slender bamboo-cane with its numerous knots and the storm-resisting matsu are supposed to indicate long and healthy life. On the right of the entrance is placed a red-stemmed me-matsu (*Pinus densiflora*), on the left a black o-matsu (*Pinus Massoniana*), the former denotes the feminine (me) principle, the latter the masculine (o), and thus they together symbolise a happy marriage. Close by the house rise the slender bamboo-canes with their ornamental branches and leaves. The shime-nawa (decorative straw-rope) which is carried over the entrance in a kind of festoon, connects them from each side. It is woven of seven, five, or three strands, as in the case of the Torii of the Shintô temples, and is supposed to divide the pure from the impure, and to forbid the entrance of the latter; the same meaning is attached to a piece of charcoal which, together with other emblems, is fastened to the Shime-nawa. Among their other emblems is particularly a boiled yebi (grasshopper-crab) in the middle, surrounded with boughs of the yudzuriha (*Daphniphyllum glaucescens*). The crab denotes old and bent age, the yudzuriha boughs, upon which new leaves shoot even before the old ones have fallen off, are interpreted as emblems of the family, which is continued, in children and children's children. The Shime-nawa seldom lacks the ornament of one or more branches of the evergreen *Nandina* with its magnificent clusters of red berries, and still less seldom of the beautiful little oranges, daidai (*Citrus bigarodia* Durham.), which are often to be seen also on the boughs of the bamboo-cane. This is far from exhausting the usual ornamental objects, though the others have much less significance.

On New Year's day, or Guwan-jitsu, itself, the Japanese must rise, and after washing and arraying himself in festal attire, salute the rising sun, then offer thanks to the gods of heaven and earth, and bow himself down before the ihai (tablets) of his ancestors at the household altar, and not till then turn his attention to the living. Greetings are interchanged, and "man-zai-raku," good luck for ten thousand years, is wished. It is necessary that this should be done with cheerful countenances, and it is customary to promote this by offering food and drink. Zôni, a stew made of fish, glutinous rice-cake and vegetables, which is only eaten at the New Year, is handed round, and toso or sake mixed with spices drunk with it.

Many other customs and numerous superstitions distinguish the festival of the New Year. Presents are exchanged and efforts made in various ways to secure the happiness expressed in the greetings of the season. The well-known takara-bune (ship of fortune), a work which represents the seven gods of fortune (*see* Religions)

in a boat upon the sea, is laid beneath the makura (pillow) on retiring to rest, because this signifies happiness and pleasant dreams for the entire year, etc.

The adoption of our calendar, and the transposition of the Guwan-jitsu from the middle or end of February to the first of January was a violent blow to the old superstitions and to many customs held sacred for many centuries which were connected with the New Year. The designation Rissihun (spring's awakening) is no longer appropriate to the first week of the present Japanese New Year, in which the weather is seldom suitable for the old-fashioned pleasure-taking in the open air—the kite flying and bow and arrow shooting of the boys, the battledore and shuttlecock (*hagoita* and *oyobane*) of the girls. Again, the strolling artists of the streets, who formerly used to amuse old and young, owing to the coldness of the season do a much duller New Year's business; as well as the actors who perform religious dances and pantomimes in airy booths, and the wandering ballad singers from Mikawa, called also *manzai*, who appear in couples in their striking costume and accompany their recitative and nasal singing with the tones of the *samisen*.

The poetical atmosphere which formerly invested the first and most important festival of the year, is rapidly disappearing. Only the Chinese living in the treaty-ports still continue to keep the New Year quite in the old fashion, and deviating on this day from their usual frugality, treat themselves chiefly by letting off fireworks and by other noisy amusements.

The Hina-no-sekku or Festival of Dolls is the Sangatsu-no-sekku festival on the third day of the third month, and is specially dedicated to girls. On this day the entire female sex appears in holiday attire. The whole household store of dolls, among which many are old family treasures, are brought out for the girls and set up in a special room. The living dolls entertain the dead ones with food and drink, the latter consisting in the absence of milk, of shiro-sake (white, sweet sake). In Kiô-bashi-dôri, at Tôkiô, where the shops are large and splendid and some of the dolls very expensive, there is great activity on this day.

Formerly the Festival of Dolls fell as a rule in the middle or towards the end of April, a time when the favourite sakura-trees array themselves in blossom, and as they remind us in many respects of the peach-tree, Europeans have named this the festival of peach-flowers.

On the fifth day of the fifth month is celebrated the Nobori-no-sekku or Festival of Flags, which is also called Shôbu-no-sekku, the Festival of Reeds. It is dedicated to boys. The same rôle which two months before was played by dolls, is now played by arms, fortifications, and warlike games. The day is called the festival of flags, because in every house in which during the previous year a boy has been born, a flag waves on a long bamboo

staff, consisting of a large painted koi (carp) of paper, which the wind inflates and carries hither and thither. It has also, as well as the bundles of reeds and mugwort, which are fastened on this day to the projecting roof of the houses, a symbolical meaning.

The Tanabata-no-sekku or Festival of Stars on the seventh day of the seventh month is dedicated to Vega (tanabata), the star of happiness. A bamboo-cane is cut down with its boughs and leaves, and set up in the court or chamber, and its crown is decorated with paper strips of five various colours, which have been covered over with verses and sayings, and directed to Tanabata. All the members of the family take part in it in holiday attire, even the smallest, who are led by the hands, that they may at least offer some syllable or word to the star, and thus be able to procure its favour.¹

Kiku-no-sekku, the Festival of Chrysanthemums, is the last of the Go-sekku of the year. It is observed on the ninth day of the ninth month; it formerly took place towards the end of October in our calendar, and therefore in the season when vegetation has already lost most of its charms, though the kiku (*chrysanthemum indicum*) are in full bloom. The varieties of this favourite flower of the Japanese are numerous and exceedingly various in colour, size and form, vying in this respect with the asters of Europe; and the cheerful and gaily dressed multitude stream out to admire them in the places which have long been devoted to their cultivation and sale.

No other nation takes such pleasure in the sight of beautiful flowers as is exhibited by the Japanese people. In the hana-ichi, or flower markets, which are open in the evenings, the majority of the buyers consist of common people, who have no costly vases at home, but do not lack a bit of bamboo-cane in which to place the flowering twig or long-stalked flower, and take pleasure in its contemplation. At the season when some favourite plant unfolds its blossom in one or other well-known place, every one who can contrive to do so, pays a visit to the spot. The roads leading to these places are then filled with gay and well-dressed people of every age and class. Such crowds of happy looking people as are then to be found gathered in the numerous tea-houses and restaurants of these localities can hardly be met with elsewhere; people who, as was said in a Yokohama newspaper some few years ago, without any thought of yesterday or any anxiety for the morrow, give themselves up with childlike and homely gaiety to the enjoyment of nature, and who, whatever difference there may be in their social position, means and culture, all participate in this pleasure.

The favourite flowers of the Japanese have been so arranged

¹ Whether the custom as here described, and as I saw it in 1875, in Owari, exists throughout the country, I could not ascertain.

according to their time of blooming, as to form a floral calendar. At the head of it according to the old calendar stands the Japanese Mume (*Prunus mume*), a kind of plum, which in February has its still leafless branches covered with white or red flowers, and as it were introduces the spring, and plays moreover, as a decorative subject, a very prominent part in artistic industries. A month later follow the peach-blossoms. The wild cherry-trees of Japan, or Sakura (*Prunus pseudocerasus*), exhibit their wealth of flowers in April, and form a great attraction to inhabitants of the district in many places where they are planted for ornament in large numbers. In May the Fuji (*Wistaria chinensis*) blossoms and adorns the only summer houses that are known in Japan, *e.g.* in the garden of the Temple of Kamedo, in Tôkiô (see illustration, p. 419). A month later the blossoms of the iris or Ayame, and the calamus or Shôbu call for admiration. In June appear the large and beautiful flowers of the Botan (*Pæonia Mutan*), so much sung by poets, and of the Hasu or lotos-flower (*Nelumbium speciosum*); then in August and September follow flowering species of Hibiscus, particularly the Fuyô (*H. mutabilis*) with which are associated the Susuki (*Eulalia japonica*) and other autumn flowers. In October we see, as has been already mentioned, the flowers of the chrysanthemum; in this month too the foliage of the Momiji (*Acer polymorphum*) and other plants is dyed a magnificent red. In November and December Sasankwa and Cha (*Camellia sasanqua* and *Thea chinensis*) blossom, and finally in January, at least in gardens, the common camellias.

As regards the inhabitants of the capital Tôkiô, there are two other festivals to be mentioned, both of which attract the people in unusual numbers, *viz.* the opening, as it is called, of the Sumidagawa, and the feast of Kudan. The first of these is celebrated on the 28th of June, below the main bridge Riôgoku-bashi. On the banks of the river, on the bridges, and in numerous boats, there gathers, as evening approaches, a dense and gaily dressed multitude, to enjoy the spectacle of a great pyrotechnic display on the river. Thousands of coloured lamps illumine the night, and a gentle breeze from the sea brings with it a pleasant coolness. As midnight draws near, the enormous multitude return home peaceably and contentedly. There is no wild shouting, no riotousness of the holiday makers to disturb the quiet night in the other quarters of the town, as so commonly happens in Europe on such occasions. The festival at the Temple of Shôkonsha lasts three days, *viz.* the 14th, 15th, and 16th of May. It might, at all events after its commencement, be reckoned among the temple-festivals. On the first day the Mikado himself makes his appearance with a great retinue to present the usual offerings to those who fell in 1868 in the civil war. The rest of the time is a genuine popular festival in the large open square close by, where racing, fireworks and wrestling matches attract the sight-loving multitude.

In the Matsuri or temple-festivals, which may be compared in many respects with the German *Kirchweihen*, only that the crowds taking part in them do not themselves dance, but look on at dancing, every one is abroad in holiday attire, Before every house in the district in which the temple stands, in honour of whose god or patron the festival is held, are hung on posts fixed in the ground the well known pretty paper lanterns, all the lanterns in one street being of the same size, form, and ornamentation. The festivities culminate in a noisy procession, a sort of carnival march to the temple, and in the pantomimes and other games there exhibited.

The broad dashi (festival car, or car of the gods) on low creaking wheels, moves slowly and heavily through the streets, drawn by oxen and pushed by dozens of screaming coolies. It is richly adorned with little flags, strips of bright-coloured stuff and green boughs. The idol in the middle is surrounded by priests, who make an infernal din with the blowing of trumpets and ringing of bells. Often there is a second storey constructed above the lower one, on which hideous maskers, with the heads of apes, dogs, and tigers, together with other animal figures, move to and fro in wild and delirious merriment. Little ambulatory theatres, a second dashi and other things, frequently follow and take possession of the rooms, stages, etc., which have been already prepared in the temple-court. A merry, densely-packed crowd accompanies them. At the temple offerings are made to the god, and a great deal of decorum and ceremony displayed by the priests, though there is little religious sentiment on the part of the gazing crowd. Every dainty that Japanese cookery can produce—rice, fish, eggs, vegetables, fruits, sweets, sake, tea—is offered to the god on his festival, always supposing that he is a Kami or Shintô god, then follow theatrical performances in pantomime before the temple, where other booths, peep-shows, story-tellers, sellers of confectionery, etc., have gathered, and a scene of even greater noise and merriment than can be witnessed at a European fair takes place.

6. RELIGION.

*Shintôism, or Kami-worship; The Doctrine of Confucius;
Buddhism; Christianity.*

There is no side of the national life of Japan which is so difficult for us to appreciate as that which relates to religious matters. We observe in what various ways the religious instinct manifests itself in temples and idols, in sacrifices, ceremonies and processions, in prayer and preaching, and we immediately ask for an explanation of what we see and hear. But whether we apply to a Japanese

scholar, interpreter or priest; whether we consult our European literature on the subject; or, assuming that we are conversant with the language, turn to a native work, we find our hopes disappointed and our desire for knowledge only partially satisfied by what we hear and read. A scarcely intelligible indolence and ignorance on the one hand, a mystical representation which it is hardly possible to follow upon the other, hardly allow us to lift the veil which hides so much of these things from us. Only those who have the time and means to search deeply, those who have the critical skill to recede from present ideas and bury themselves in the old written traditions, can unearth the treasures which for us Europeans still lie buried under the dross and other foreign admixtures, which have accumulated during the course of centuries. A beginning in this respect as regards Shintôism has been successfully made by several scholars, and in particular by Satow and Kempermann.

Two pagan religions have established themselves in Japan, and been independently developed side by side, although not without an important influence upon each other; two religions served by many hundreds of temples and thousands of priests; namely Shintôism and Buddhism.

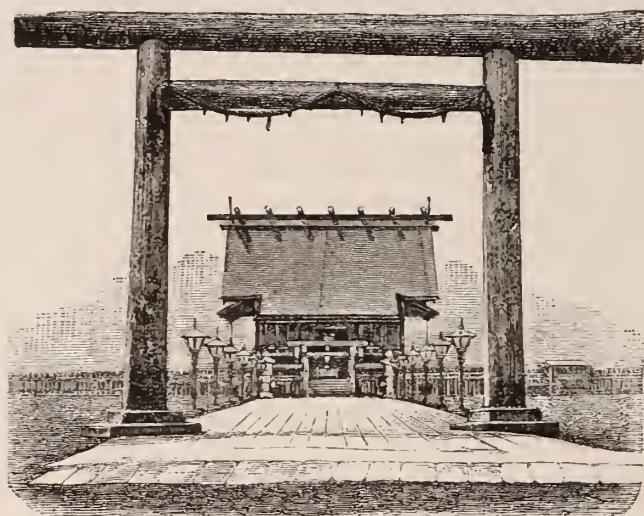
When the ancestors of the Japanese people landed in the modern Idzumo, Iwami, Satsuma, Hiuga and other provinces, they already possessed a certain amount of civilization; for they knew and practised agriculture, and had raised themselves in religious matters from nature-worship to the worship of ancestors, which, under the name of Shintôism, has been maintained down to our own days. The deification of ancestors is also found in a more or less developed form among the Chinese and other peoples of Eastern Asia, and probably is derived from a common source. The most prominent objects of nature-worship, such as heaven and earth, sun and moon, fire, etc., are intimately associated with the history of the creation of the primæval ancestors, and are indeed partially identified with it. The most remarkable feature of Shintôism,¹ or the Kami-doctrine of Japan, is the divine honours paid to Kami or the spirits of famous princes, heroes, and scholars. But, besides these, legions of subordinate gods fill the popular Pantheon.

This Kami-worship can only be called a religion in virtue of its expressing itself in temples, prayers and sacrifices; for strictly speaking it is entirely wanting in those essential marks of a religion, a definite creed and a moral code. The only appreciable feature of Shintôism is an elaborate ritual. The worship of Kami appears in the form of sacrifices and of a kind of liturgy, consisting of an address and a prayer, directed to the spirit, and called *Norito*. Its ethics are derived from the moral philosophy

¹ The Chinese word *Shin*, Japanese *Kami*, signifies spirit, soul, and is used to indicate the old Japanese gods; *tô* (*dô*) signifies way, doctrine.

of Confucius and other Chinese sages, while Buddhism has exerted an influence on the architecture and arrangement of temples, on vestments and ceremonies, and contributed to increase their splendour. Pilgrimages have also been introduced, after the example set by the Buddha-worshippers.

Of the external signs of the Miyas¹ or Shintô-temples, the principal are the Torii,² portals, through which the temple-courts (Yashiro) are entered. They consist of two high round posts, sunk in the earth, and connected at the top by round cross-beams projecting at each end, under which, at a short distance, comes a second round or rough-hewn connecting-piece. The Miya is in its



THE SHINTÔ-TEMPLE SHÔKONSHA AT KUDAN IN TÔKIÔ.

pure original form a small temple without idols, in the chief hall of which (Honden), the holy, or what is deserving of reverence, is symbolized by various objects, which are placed on or beside a simple unlacquered table representing the altar. These are a round metal mirror as an emblem of the divine splendour, and (perhaps) of the sun; also the Gohei,³ that is, connected strips of white paper, often gilt on the edges, cut out of one piece. The meaning of these strips is doubtful, but it is supposed that the Kami or spirit of god settles upon them. Mirrors, and Gohei on a staff or on the wall, are seldom absent from a Shintô-temple. A

¹ Miya = worshipful house.

² Torii, *i.e.* "bird-rest," were originally intended for birds to rest on at night.

³ Gohei = exalted (imperial) gifts.

third and common symbol, which is supposed to typify the purity, depth and power of the Kami, is a precious stone, or usually a globe of rock-crystal.¹ Generally too we see on one side of these things, and somewhat lower, two vases with branches of the ever-green Sakaki (*Cleyera japonica* Thbg.), which here represents the *Illicium religiosum* of the Buddha-temples, and from whose wood the staff for the Gohei as well as the chop-sticks for the meat-offerings were originally exclusively made.

The pure and simple Shintô-temple, inclusive of the Torii, is built of the white wood of the Hinoki (*Chamaecyparis obtusa* S. and Z.), and roofed over with the bark of this tree, as is also the palace of the Mikado at Kiôto, as of a Kami sojourning on earth and acting as mediator between the Japanese people and the gods. Hinoki and Sakaki are the plants specially dedicated to Kami-worship. No lacquer and no metal ornament is admissible. But only a few Kami-halls, including the most celebrated, have maintained this original simplicity, especially the temple dedicated to the sun-goddess, Amaterasu (Tenshō Daijin) near Yamada in Ise; and the Ōyashiro at Kidzuki in Idzumo, in which Ōkuninushi, the highest earthly god and first ruler of that sphere, is worshipped. In Tōkiō the temple of Shōkonsha,² in the Kudan quarter, erected to the memory of those who fell in the civil war of 1868, presents (see illustration) a clear idea of a simple Kami-hall. The ugly glass lanterns here substituted for those of stone (Ishi-dōrō), formerly used, are indeed as inappropriate an innovation as the two coloured oleographs in gold frames which surprise us in the very Honden, and depict the battles of Wörth and Gravelotte.³ To the left of the high entrance-steps into the hall is a long stone trough with holy water, then on the steps themselves the almsbox closed with a wooden lattice-work and intended to receive the copper coins which are here offered, and beside it the cord with the bell which is rung by every one who comes to implore an audience of the Kami. Shintōism aims at the happiness of earthly life, and assumes that the souls of the departed can essentially aid in securing it. They are conceived therefore to be present, and are summoned by those who come to them, by clapping of hands, a bell, a drum, etc. In every house a small altar is erected to the Kami of the ancestors, before which the head of the family offers his devotions in a peculiar way.

The Shintô-gods are by no means the pure and exalted forms which Buddhism presents to us—no saints through the overcoming of sensuous pleasures—but affected by all human feelings and

¹ The mirror, the precious stone and the sword, to which the brocaded banner was afterwards added, are also the insignia of the imperial house.

² Shōkonsha, named from the Chinese words Shō, invite; Kon, spirit; Sha, temple.

³ The Japanese nobility, feeling this, replaced the former by stone-lanterns in 1878.

weaknesses, and taking pleasure in everything that adds enjoyment and amusement to existence. Accordingly their worshippers seek to delight them on their festivals, not only with meat and drink, but also by theatrical processions, pantomimes, and so on, and do not think it objectionable that the road from the town of Yamada, in Ise, to the largest Shintô shrine in the country leads through a street in which many houses are dedicated to the worship of Aphrodite. Of the servant of the Kami, purity of the body is required rather than purity of the heart, just as it is not conspicuous virtue, but other qualifications, that gave him a certain claim to apotheosis. He who had distinguished himself by great bravery, learning and benevolence, was after his death ranked amongst the gods, and the Mikado and his council determined, and indeed still determine, the rank to be assumed by him in this new society.

The Shintô-priests (Kannushi) do not shave their heads, as the bonzes do, and only wear a special dress when exercising their office. They neither practice celibacy nor have monasteries. On the other hand, they are generally considered—and this is no doubt partly a consequence of their office being hereditary—much less educated than the servants of Buddha.

Shintô-worship has an elaborate ritual and numerous rules as to purification. Birth and death, as among many other peoples, especially render unclean, and accordingly in former times there were special houses of death (Moya) and birth (Ubuya), as well as feasts of purification. During the erection of a Kami-hall the builders must live by certain rules, must go to work washen, barefooted and in white clothing, and must moreover observe stringent rules with regard to implements and building-materials.

The Miyas are divided into various classes, corresponding to the rank held by the Kamis to which they are dedicated. The principal ones are rebuilt every twenty-one years; including the two temples near Yamada in Ise, the temples at Kidzuki and Sada in Idzumo—where great festivals were held in the eleventh month of the year, because according to the old belief all the Kamis of the country assembled there—the Kotohira, not far from Tadotsu in Sanuki, and various others. According to the 12th law of Gongen-sama, the Daimiôs of Bishiu (Owari) and Kishiu (Kii) were exempt from making offerings, but had to see that their forests furnished the necessary wood for the reconstruction of these temples. "That must be, that our fatherland may be happy, and the five fruits of the field¹ may prosper."

Upon the old Kami doctrine was grafted in the third century of our era the political philosophy of Kôshi (Confucius). This was received with the same enthusiasm which greeted Western civilization at the time of the restoration (1868), but it never made the

¹ By the "five fruits of the field" are meant rice, barley (and wheat), millet, Italian millet, and beans.

same profound impression upon the people. On the other hand, it exercised a wonderful influence upon the thought and life of the Samurai.

As to the life and actions of the celebrated Chinese philosopher, there is no doubt. He is a historical personage who appeared in the sixth century B.C., about a hundred years later than Siddhârtha (Buddha), and about the same length of time earlier than Socrates. He was a poet, historian, critic and philosopher, though here we are concerned with his importance in the latter respect. He left untouched, however, the higher religious problems of our relations to God, and the immortality of the soul. His ethics culminate in the question: "How must man demean himself as a citizen and towards his fellow-men, in order to be virtuous and happy?" According to Kôshi, the highest duty and virtue consists in piety towards our parents, and this ought to continue even after their death. He knows nothing of universal philanthropy; as we have already seen, he regards blood-vengeance as not merely admissible, but as a duty. The true follower of Confucius is a good son, loyal subject, and faithful husband. "Among a hundred virtues, piety towards parents is the chief; among ten thousand sins, adultery is the greatest." "Fidelity, love of parents, purity of heart and candour shed a perfume through a hundred generations." The five great virtues, which ought according to Confucius to be constantly practised, are: benevolence, candour, courtesy, knowledge, and fidelity; but as regards the latter, he has apparently woman rather than man in view. Upon her he imposes as the three highest duties (San-jô): obedience to parents, to her husband, and—after his death—to her eldest son; only in the case of the man does he admit grounds for divorce.

According to Confucius, and his almost as celebrated disciple Mencius (Môshi), the nature of man, as bestowed upon him by heaven, is good, and it is only the association of the pure soul with the body and its necessities which generates passions and sins. The principal characteristic of the writings of Mencius is described by the maxim of Thales, "Know thyself."

No philosopher or legislator of classical antiquity ever exercised in his lifetime, not to say after his death, so great an influence as Confucius, the Chinese Socrates, exercised upon his native country and the whole of Eastern Asia. Three thousand disciples listened to his words, and were inspired by them and by his noble example. The entire life and the views of life of the educated classes in the countries of the Eastern monsoon district were influenced and pervaded by the doctrines of Kôshi and Môshi. These doctrines formed, and even yet form, the gospel and the quintessence of all worldly wisdom to the Japanese Samurai; they became the basis of his education, the ideal upon whom he modelled his conceptions of duty and honour. They showed themselves to be especially influential when the power of the Buddhist monks was

broken, and Christianity was exterminated. When Iyeyasu composed his laws he knew of no higher model than Kōshi, whose principles are everywhere to be discerned.¹

This political ethic of the Chinese sage suited the ideas of the Samurai and harmonized also with the Japanese feudal system as well as the Kami doctrines, which thus received an important support. Its effectiveness lay not so much in a peculiar depth and originality, as in the fact that Confucius on the one hand adapted himself to existing ideas, while on the other he rose far above the old mysticism, and spoke to the thinking portion of society more earnestly, intelligibly, and convincingly than any of his predecessors; but, above all, in the circumstance that according to the reports of all observers he lived in conformity with his teaching, and was a shining example of moral purity and nobility of thought.

In the second place, Buddhism also exercised a powerful influence upon the Kami-worship of the Japanese. Buddhism had in the first century of our era spread over China from the Ganges and the Valley of the Himalaya, had then, in 372, crossed over to Corea, and thence in the middle of the sixth century made its way to Japan. The gentle, benevolent and thoughtful-looking Buddhas (saints), carved in wood or hewn in stone, were now introduced to the people with a pompous ritual. But the new cultus did not make its powerful and penetrating appeal to the senses only; it supplied rich nourishment to the imagination also, chiefly by the doctrine of transmigration and the descriptions of distant worlds, which, inhabited by happy angels and Buddhas in paradisiacal splendour, were held out to the adherent of the new teaching, whatever might be his social position, as the goal to which he might attain. As, moreover, Buddhism, here as everywhere, showed itself tolerant and peaceful, accommodating itself to old religious ideas, and taking up² even the Shintō-gods into its system, as it had already taken up the numerous deities of Brahmanism, and as it was favoured by the authorities, it spread very rapidly and became the really popular religion, to which the Japanese still adhere.

The professors of Buddhism have surrounded the life-history of Buddha with many myths, but it is certain that he was a prince of the family of Çākya in modern Behar, and was called Siddhārtha. He surpassed his contemporaries not only in intellect

¹ The Go-rin, *i.e.* the five human relations, between father and son, master and servant, man and wife, friends and brethren form the starting points of the ethics of Confucius as well as of the laws of Iyeyasu.

² The Buddhist, however, assigns much lower places to the popular Hindu deities. Even Brahma, Siwa, and Vishnu, are far inferior to the Buddhas (saints). The coarse idol worship which Buddhism afterwards developed, had no foundation whatever in the teaching of Siddhārtha. Even the elevation of the first seven Buddhas to the highest throne was due to his successors, who added continually to the complexity of the apparatus, and thus relegated doctrine more and more to the background.

and knowledge, but also in nobleness of form and in his skill and strength in all knightly exercises; he very early displayed deep sympathy with the misery and sufferings not only of men but also of animals, and a strong inclination to monastic retirement and silent contemplation. The melancholy which was the result could not be dispersed by the happiest married life, in a palace and grounds beautiful as a paradise, and at length it drove him to resign all the earthly happiness that he enjoyed—wife, child, father, palace, and the inheritance of a splendid kingdom—to withdraw secretly, and to lead for seven years a wandering life in foreign lands, amid privations and self-denials of many kinds, in order to seek the way to true happiness. At length (so runs the story) in a lonely forest, under a Bôdhi tree (*Ficus religiosa*), Mâra, the devil and lord of the air, appeared to Siddhârtha, and tempted him to sin in ten different ways. He resisted however, and thereby underwent a sort of transformation. A bright light surrounded him; henceforward he was Buddha,¹ a saint and conqueror. He had found the philosopher's stone, the way to real felicity; this lay in the overcoming of temptation and of the desires. "He is already far on the way to everlasting happiness (to Nirvâna), whose foot tramples on a favourite sin."

Buddha now no longer remained in solitude; he was impelled to proclaim the new found truth and to make others sharers in his happiness. Henceforward Siddhârtha, the son of a king, appeared among men as Buddha, in a yellow dress and with bare shaven head, going from place to place—begging for the slender means of subsistence—to preach his new doctrine. No one could resist his victorious glance, his entrancing eloquence. At length he returned to his own home, where his father, wife, son (*Çuddhâdana*, *Yaçôdharâ*, *Râhula*), and the whole country immediately accepted, and were made happy by, the new doctrine.

Buddha was, properly speaking, only a reformer of Brahmanism, which had degenerated into a rigid system of caste and superstitious idol worship. His successors made him a deity, and thus brought it about that his system of morals degenerated more and more into crude idolatry.

If we strip off the mystic and poetical dress in which the person and life-history of Prince Siddhârtha are enveloped, there still remains a pure and lofty figure, possessing in a high degree all the qualities of an active reformer; holy earnestness and moral depth, convincing power and dramatic force of speech and appearance.

The main features of the new religion established by Siddhârtha are thus characterized by Dr. Eitel, one of our best authorities on the subject.

¹ Çākyaṃuni (Teacher from the Çākya family) Gautama Buddha (sage) is the full title. The Japanese call him Shaka.

1. *Socially* Buddhism teaches the depreciation of caste and of property.

2. *Dogmatically* it is a system of atheism, which deifies man and moral ideas.

3. *Morally* Buddhism is the doctrine of the vanity and instability of all earthly good, of the migration of souls, and of final absorption in Nirvâna.

The three main features of Buddhism are therefore : 1, *Atheism*, or rather the deification of men and ideas in a polytheistic form of worship ; 2, the doctrine of the *transmigration of the soul*, with which is involved the abolition of caste, and upon which rests the efficacy of the Buddhist morality ; 3, the doctrine of salvation from sin and crime, and the attainment to Nirvâna, *by our own strength*.

Shaka (Buddha) like Confucius, is only a philosopher and a mirror of virtue, not a redeemer. According to Buddha, man can work out his own salvation, and in this point, as in many others, he is not far from the Chinese philosopher. He recognises also a moral principle of good, and we might also suppose that he combines it with the notion of a living God (though this notion does not take any definite form with his successors) when he says ; "Higher than the heavens and far beneath hell, beyond the furthest stars and further than Brahma dwells, before beginning and end, eternal as space, there is a divine power, which impels only to righteousness, and whose laws do not pass away." The most important part of his doctrine is the transmigration of souls. Before the tribunal of the (Brahminic) god Yama, called in Japan Emma-sama (Yemma-sama),¹ the ruler of Hades, the soul of the departed appears, to be judged and sent back into the world, where, according as it has deserved well or ill, it reappears in the form of a more perfect man or higher being, or in that of an animal. If the man has behaved badly, he is set still further backward in his way to Nirvâna, and must first pass through the two most wretched states of hell and of the hungry spirits, before he reappears on earth in an animal shape. King Yama decides not only as to the mode of this transition, but also as to its duration. "He who has toiled as a slave," teaches Buddha, "may reappear as a prince ; he who has ruled as a king may perhaps on his reappearance wander in rags. Higher than Indra (the god of heaven) ye may exalt your lot and sink it lower than worms and gnats." "Seek nothing from helpless idols (of Brahmanism),

¹ We frequently find in Japan figures of this Yama or Emma-sama, the King of Hell, either alone or crowned as a king in the series of the Ju-ôdo or ten imps of hell—painted vermilion, with gaping mouth, with distorted eyes, a great moustache, and a sword at his side. The wall in the background of this group shows us the fires of hell, in which dragons and other monsters wallow and rage.

salvation lies in yourselves. Every one makes his own prison ; his actions prepare for him joy or pain."

According to Buddha's doctrine the misery and wretchedness of this life are consequences of former sins, a view which was widely spread in ancient days. For even in the Bible we find it appearing in the question put to the Saviour : "Master, who did sin, this man, or his parents?"

The goal of the transmigrations of the soul is Nirvâna. He who has attained it is (according to Buddha) envied by the gods.¹ It is the desirable end of the soul, after it has triumphed over matter and, freed from all passions, enters into this consecrated space, where it loses the consciousness of its existence, yet is by no means reduced to nothingness. "As the dewdrop disappears in the shining sea, at the rising of the sun, so (according to Buddha's teaching) the saints pass into Nirvâna." The original meaning, however, of Buddha agrees with the etymological signification of Nirvâna, an extinction and annihilation.

The great mass of Buddhists therefore prefer, in accordance with a later doctrine which emanated from Cashmire, to dwell upon the Paradise in the furthest west, whither another Buddha, named Amitâbha, leads its faithful followers to happiness, where they enjoy the blessed sight of Amitâbha, of the loveliest gardens, with flowers, water, birds, etc.

Every Buddhist is in a state of metempsychosis and on the way to Nirvâna. Whether this shall be shortened or troublesome and full of thorns, depends entirely upon himself. Self-control, the avoidance of evil, good works, pure thoughts, promoted by monastic retirement and meditation, hasten the pilgrimage by which the soul, after passing through various stages of perfection, finally enters Nirvâna. Only Buddha himself gained it directly upon his death. But he had already gone through five hundred and fifty transmigrations before he chose as his parents Mâyâ and Çuddhâdana, Queen and King of Magadha (Behâr), and appeared as Prince Siddhârtha.

The belief in this doctrine of metempsychosis was assuredly a powerful stimulus to a virtuous life. Not only the cardinal sins, murder, theft, adultery, lying, drunkenness, and immodest language, are forbidden by Buddha,² but all other sins, such as hypocrisy, anger, pride, envy, greed, talkativeness, cruelty to animals and others are denounced, while there is no lack of exhortations to love of parents and children, to gratitude, moderation in happiness, patience in misfortune, and calmness of soul in all situations of life.

The Buddhist must not slay anything, both for pity's sake, and

¹ Of the Brahmins.

² According to the Gokai or "five chief commandments," the Buddhist must not kill a living creature, nor steal, nor indulge in lust, nor lie, nor partake of any spirituous liquor.

that he may not hinder even the smallest creature in its upward path ; for in the domestic animal that he strikes, or in the smallest worm which he kills, there may live the soul of one of his ancestors. In Japan this rule is now rigidly observed only by Buddhist monks, who alone are vegetarians. But some of the lower orders make a peculiar use of it, by catching birds, especially young ones, shutting them up in small cages, and offering them for sale, at the entrances to popular temples, to the sympathetic visitors, who buy them and restore them to freedom. So also in some of the streets of Tôkiô we may frequently see women and children with live gudgeons, which they catch in some adjoining ditch, and restore them to it if the passer-by pays the small amount necessary to ransom them.

Buddhism shares with Mohammedanism the sway over Asia. It is one of the oldest and most influential of religions. Its adherents number nearly five hundred millions of human beings, *i.e.* about a third of the population of the globe. "The history of Eastern Asia is the history of Buddhism" says Dr. Eitel. "Yet the conquests of this great system of philosophical atheism, which banishes from the universe the existence of a creative and ruling deity, and deifies man instead, are not confined to Asia, for these doctrines nowadays have numerous supporters even in the West." Think as lightly as we may of the crass idolatry of Buddhism in its later and degenerate form, we shall yet be obliged to admit that the rapidity and the enthusiasm with which Shaka's (Çâkyamuni's) doctrines spread themselves through the whole of Eastern Asia, and the twenty-five centuries during which they have maintained themselves, speak sufficiently for their great importance. They have indisputably exerted a civilizing power unequalled by any other in Eastern Asia, have driven out the bloody sacrifices of earlier cults, have counteracted the rigid spirit of caste, and spread a mild and peaceful tone of thought, especially among the great masses of the people. The Japanese in particular are indebted to Buddhism for their present civilization and culture, their great susceptibility to the beauties of nature, and the high perfection of several branches of artistic industry. In China as well as in Japan the common people have found in Buddhism much more satisfaction for their religious needs than ancestor-worship, and the moral teaching of the Chinese sages, could give them ; though it was of course otherwise with the Samurai, who were equally warlike and proud of their privileges.

The influence of Buddhism upon Kami-worship has been already briefly indicated. It showed itself in particular when, towards the year 800, the pious and learned monk Kôbô Daishi, to whom is ascribed the invention of the Hiragana, gave expression to his conviction, that the new doctrine could only strike deeper root by fusing with itself the old gods and heroic legends of the Japanese. Hence in accordance with the precedent set by him

the Kami were represented according to their respective rank as forms of manifestation of Buddha, or subordinate deities. Thus for instance, Amaterasu, the sun-goddess, became a Buddha under the name of Dainichi Niorai, and the war-god Hachiman (Ôjin Tennô) was identified with Amida.¹ Both accordingly took very high positions among the four ranks of the happy after death (the Hotoke or Buddhas, the Niorai or divine protectors of men, the Bosatsu [Bôdhisattva] or apostles of Shaka, and the Rakan or the first five hundred of his disciples). The Emperor Saga was much pleased with this peculiar amalgamation of Shintô with Buddhism and named it Riôbu-Shintô, *i.e.* "twofold divine doctrine." It was also greatly approved among the people, and very soon found expression in the temples. The old simplicity of the Kami-hall disappeared. Idols, as representatives of the Kami according to the Buddhist conception, filled the rooms; and even as regards the torii, the old restriction as to the exclusive use of hinoki was no longer maintained, but they were made also of hewn stone, and even of bronze, or the covered gates of the teras were employed in their place. Moreover, as Dr. Satow, the profoundest student of this subject, has shown, that combination of the old Kami-worship with Buddhist mysticism which bears the name of Riôbu-Shinô, is by no means the only modification of Shintô under Buddhist influence. Very frequently, until the most recent times, the same temple served for both confessions, a fact which plainly shows the tolerance of Buddhism. In such cases the Buddhist altar in the background was usually separated by the misu, a curtain made of strips of bamboo, from the Shintô-altar with its mirror and Gohei. Bonzes (in Japanese bôzu or oshô) before the former, and Kannushi before the latter, celebrated in turn.

But even the old Buddhists were far from maintaining the old unity of creed and cultus. They developed, especially in their teaching concerning morality and the destiny of man, various ideas which gave rise to a series of sects, some of which showed as much hostility to each other as the various confessions in the Christian Church.² Several came over from China, but most of them originated in the 13th century, for this was the golden age of Buddhism in Japan. In the same century its highest intellectual and material power, the life and influence of its greatest minds, were developed.

At present there are ten chief sects (shiu, shiu-mon, also written shû and shû-mon) among the Buddhists of Japan, which according to the order of their foundation are as follows :—

¹ Sumera or Subera, the old title of the Mikado, was likewise transformed by Buddhist priests into Tennô and Tenshi (see p. 226).

² According to Klaproth's *Annalen* there were, towards the end of 8th century, six sects in Japan; according to other authorities there were Hasshû (8 sects), viz. the Sanron, Jîôjitsu, Hossô, Kusha, Kegon, Ritsu, Tendai, and Shingon. Such is their historical order. Only the last two continue to exist.

1. *Tendai* (heavenly command), founded by Saichio (Dengio-Daishi), in China, 805 A.D., having 4,785 temples.¹
2. *Shingon* (true words), founded by Kubai (Kôbô-Daishi), 816 A.D., having 12,928 temples.
3. *Yudzûnenbutsu* (circulation of remembering Buddha), founded by Rionin, 1127 A.D., having 362 temples.
4. *Jiôdo*, or *Jôdo* (pure land, the heaven of Amida), founded by Genku (Benkô-Daishi), 1174 A.D., having 8,314 temples.
5. *Rinzai*, founded by Beisai, 1191 A.D., having 6,155 temples.
6. *Shin* (spirit), or *Shin-shû*, also called *Monto* (gate-followers) and *Ikkô* (lit. Ichi-kô, undivided), founded by Shinran (Kenshin-Daishi), 1224 A.D., having 19,208 temples.
7. *Sôtô*, founded by Dôgen (Jiôyô-Daishi), 1227 A.D., having 14,334 temples.
8. *Nichiren* (Sun-lotus), or *Hokke* (the flower of the law), founded by Nichiren, 1253 A.D., having 4,970 temples.
9. *Ji* (Seasons), or *Ji-shû*, founded by Ippen, 1276 A.D., having 586 temples.

10. *Wobaku*, founded by Ingen, 1654 A.D., having 577 temples.

[The fifth, seventh and tenth sects are named after places in China, where they originated. They are branches of the old *Zen* (meditation) or *Zen-shû*, which had been founded by Dharma in India, 513 A.D.]. In 1880 there were in Japan 72,158 Buddhist temples, against 186,702 temples of Shintô.

All these sects use Chinese translations of Sanskrit works, especially the Tripitaka, or Buddhist canon, as well as books written in Japanese.

The Zen, Tendai, and Shingon sects are also called learned sects, inasmuch as their priesthood have always attached great weight to the knowledge of Sanskrit and its daughter-languages, and some of their religious writings are composed in one of the latter. This sacred written language of the Buddhists bears in Japan the name of Bonji.

The *Tendai-shiu* derived its name from the holy mountain in China upon which stood its famous monastery, in which, towards the end of the 8th century, a prince of Ômi, called Saitô, pursued his studies. After his return he exerted a great influence over the Mikado Kuwammu-Tennô. He joined the Tendai sect and granted it great privileges on Hiyei-zan, where Saitô founded the famous monastery (see the Historical Portion). He was especially successful in reforming the degenerate priesthood, in stimulating them to undertake classical studies, and in elevating their morality. Besides the temple-colony on Hiyei-zan and the still flourishing monastery of Miidera, near Ôtsu, on the Lake of Biwa, the sect

¹ I owe the figures as to the number of temples to my friend Mr. Bunyiu Nanjio, the learned Sanskrit scholar at Oxford, who has taken them from the census of 1880. The first name of the founder is his personal, the second (in brackets), his posthumous one.

also possessed the celebrated temple of Tò-yei-zan, at Uyeno, where dwelt the high priest Rinnôji, an imperial prince, with a revenue of 13,000 koku.

Kôbô Daishi, or Kûkai, the inventor of the Hiragana, founded the *Shingon-shû*, and built for it a celebrated temple at Makinô in Idzumi. It was he who made the fame of Kôya-san in Kii. Kon-gô-hô-ji, the magnificent and well-preserved chief temple of this famous monastic town, belongs to this sect. Its monks are strict vegetarians. They sell indulgences (O-fuda) against coughs, the devil, the smallpox and other things, and make a great deal of money by the sale of the dosha or wonderful sand from Muroo-san in Yamato. A small pinch costs 3 sen or $1\frac{1}{2}d$. It is supposed to make the limbs of the dead soft and flexible again, so that they can be easily laid in the chest or coffin. The paper shrouds, painted all over with bonji-characters, called Kiô-katobira, are also sold by the priests at Kôya. Only the Tendai and Shingon sects use the rimbô, or prayer wheel, which plays so great a rôle in Tibet.

The three most popular and influential sects of the present time are the Shin or Monto, the Nichiren or Hokke, and the Jôdô.

The *Shin-shû* or *Monto* have been justly called the Protestants of Japanese Buddhism. This sect rejects celibacy, penance, abstinence from certain food, pilgrimages, asceticism, monasteries and amulets. Its followers regard belief in Buddha, earnest prayer, noble thought and action as the essentials of religion. The sect enjoys great esteem because of the purity of its morals. It dates from the 15th century. Like Luther, its founder, a kuge, married and introduced the vernacular speech and writing, the Hiragana, instead of the unintelligible Bonji; but from among their learned priests, several have of late years been sent to England to study Sanskrit and the old Buddhist texts. The priesthood is hereditary, as among the Shintôists, the worship is very ornate and magnificent, and its altars are splendidly furnished. The Monto worship exclusively Amida.

The *Shin* sect has at present the largest share of respect and influence among Buddhists. In Tôkiô the chief temples of its six branches are, the Nishi-Honguwanji, Higashi-Honguwanji,¹ Sensôji, Kôshôji, Bukkôji, and Kenshokuji. On the 28th of November, 1876, the Mikado conferred upon the sect the high distinction of informing the high priests of the two first-named temples, and through them the whole body, that he bestowed upon their founder Shinran Shônin, who had been dead more than six hundred years, the honorary title of Kenshin Daishi (Revealer of Truth).

The *Nichiren* or *Hokke* have ever formed a contrast to the Shin, as they have always claimed to be the truly orthodox, and

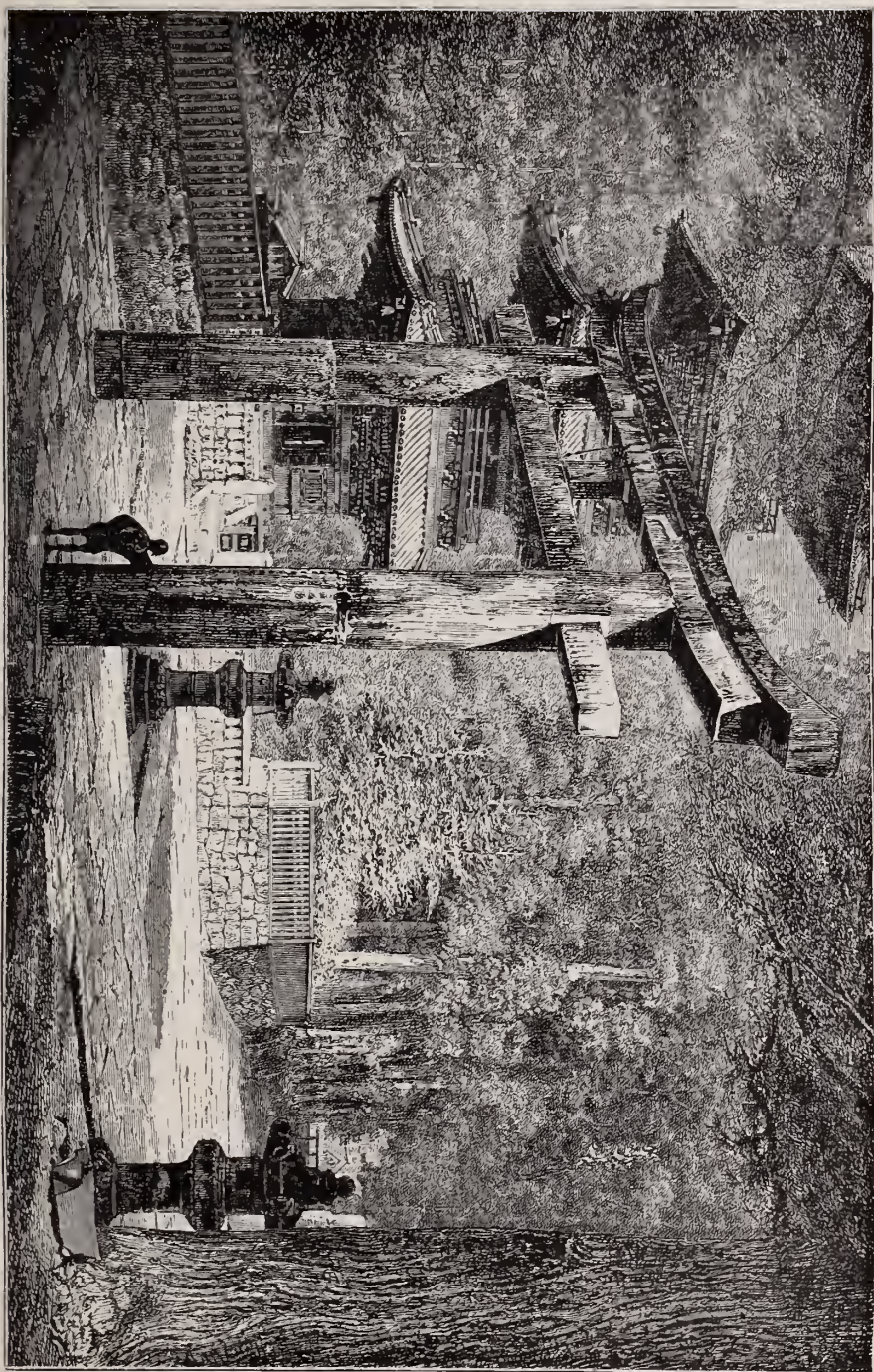
¹ In almost every large town, *e.g.* at Kiôto, Ôzaka, Nagoya, etc., the Monto sect has two temples with this name. Nishi, "west;" higashi, "east;" hon, "chief;" guwan, "prayer, request;" ji (tera), "the Buddha temple."

have exhibited the greatest zeal and bigotry, and an intolerance, which is the more striking as it is absent from most of the other sects. This intolerance has frequently shown itself not only against these sects, but in particular against Christianity, the bitterest foes of which, such as Katô Kiyomasa, belonged to this sect. The Hokke-shiu developed great power in Kamakura, and became very influential especially in the north-east of Japan. The Nichiren are violent and noisy, and attach great importance to externals. At present their priests are not greatly esteemed, as they have the reputation of fostering superstition, and profiting by the ignorance of the people. Their most famous temples are those at Minobu in Kôshiu and Ikegami near Tôkio.

The great influence which the Nichiren obtained in the first century after their foundation, is to be attributed partly to the knowledge and unwearied zeal of their founder and the persecutions to which he was exposed, partly to the clearness and definiteness of his doctrine. He rejected the usual prayer of the Buddhists: "Namu Amida Buddha" (Honour to holy Buddha), and taught that the correct address must be: "Namu miô hôren ge kiô" (Honour to the salvation bringing book of the law), according to the Chinese translation of one of the most important of the Buddhist canonical books. Upon this he and his followers always laid great stress, and declared that the heresy of the other sects must assuredly bring them to hell.

The prosperity of the Jôdo-shiu culminated under the rule of the Tokugawa, who gave in their adhesion to it. Iyeyasu and his immediate successors built for it the great and wealthy temple of Zôzôji at Shiba in Tôkio, which the writer saw devoured by the flames on New Year's night, 1874. Its priests, like those of the Nichiren, strictly insisted upon celibacy, and abhorred the eating of flesh. They taught that the health of the soul depends less upon virtue and moral perfection than upon the strict observance of pious practices. The continual repetition of prayers, which they accompanied by striking upon a round bell, was one of their main exercises. They always possessed many adherents among women, and, it is said, not unfrequently availed themselves of scandalous means, to entice rich offerings from them.

We have already referred (p. 272), to the relationship of Catholic rites and ceremonies to those of Buddhism. The great similarity to the doctrine of the miraculous incarnation of the Redeemer, a future judgment, an existence in heaven or hell, the passage through purgatorial fire, the adoration of saints, etc., is not less striking, and has been variously explained. Few will be inclined with the well-known Father Huc, the celebrated traveller in Tibet, China and Tartary, to regard it as a work of Satan. As Christianity is of much more recent origin than Buddhism, it was natural to suppose that it had borrowed the common features from the latter. More recent inquirers in this department have, however, proved that



SHINTŌ GATE AND PAGODA AT NIKKŌ.

the true relationship is the converse, and that Buddhism only became acquainted with and adopted these doctrines and ceremonies on coming into contact with the Nestorians in Tibet and China.¹

Japanese bonzes and kannushi are not behind many Catholic priests in fostering superstition and imposing upon the credulous multitude, nor are pilgrimages and the sale of indulgences extinct among them. At the famous temples and monasteries of Japan the pilgrim can buy not only holy water, a protection against Oni (the devil), small-pox, coughs, and other diseases, but also *O-fuda* which ensure him good fortune in his household and business, and many other advantages.²

We have spoken above of the gradual degeneration of Buddhism and the development of a gross idolatry. The responsibility for the legion of greater and lesser divinities, who are partly represented in sensuous forms, partly exist in idea only, must be primarily attributed to the efforts of the Buddhist priests to make themselves intelligible to the people, by endeavouring to accommodate themselves to old conceptions, and introducing idols as the representatives of abstract ideas, or of the old divinities.

Of the many hundred idols which we meet with in Japan, only the commonest and most popular can be mentioned here. First of all there are the seven gods of fortune, whose favour can secure fame, love, talents, riches, sustenance, contentment, and longevity, those much coveted blessings. Two of them, *Daikoku*, the god of riches, and *Ebisu*, the god of sustenance and of the fishmarket, are to be found in almost every house. The former is often represented with a rice-sack, the latter with a fish under one arm and a fishing-rod under the other; but these emblems are sometimes wanting, and indeed not unfrequently the figures are reduced to two stiff and distorted masks with a smiling expression and elongated and much swollen ear-laps. *Emma-sama* and his assistants have been already mentioned. Another common and favourite group of idols consists of the Jizô-sama, called also the Rokudô-no-Jizô-sama, or the six succourers. They are frequently to be seen in a row under a roof at the side of the high road, and more commonly still near the temples. Their primary function is to assist gener-

¹ See Eitel: "Buddhism; its Historical, Theoretical, and Popular Aspects." London, 1873.

² The *O-fuda*, or passes (indulgences), which are sold for example at the famous Buddha (now Shintô) temple Kotohira in Sanuki, for a bu (about one shilling), are printed strips of paper. These *O-fuda* are kept in flat white boxes of various sizes, according to the price paid for them, and are stamped with the great red stamp of the temple. One of these indulgences, which I procured in 1875, ran as follows: "Kotohira-no-miya. Niya sanjitsu kito kainu yenchô shugo;" i.e. "Shintô-temple Kotohira. He who prays for two nights and three days will have a flourishing business for a long period." On others domestic happiness, or recovery from illness, is promised. Each ticket contains only one such assurance, and the purchaser on coming to the cashier with his ichibu (one bu) is asked which he wants. He may arm himself with all of them if he pays accordingly.

ally the six classes of reasonable beings, distinguished by the Buddhist metempsychosis, namely, gods, men, asura, animals, hungering demons, and those condemned to hell ; but they render other special services besides. Thus at one of the temples in Kiôtô is to be seen a sitting Jizô, which has a child's bib tied about it, and its lap full of pebbles ; it assists children through the teething process. *Binzuru-sama* is a much consulted doctor of a peculiar kind, as we may have opportunities of perceiving at Asakusa in Tôkio, Zenkôji, and elsewhere. He is carved in wood, and sits in oriental fashion, or like a tailor, and has the inevitable contribution-box with the lattice-work cover in front of him. When the suppliant has offered his copper coins, he puts the palms of his hands together in prayer, makes his obeisance to the idol, and then approaches it. He then passes his right hand over the idol's face, ears, knees, and other parts, and proceeds to rub with it the corresponding places on his own body. Binzuru's form and his numerous visitors prove how much his assistance is sought after. He is not only polished by this process of rubbing, but has been deprived of his long nose and the other projecting portions of his hideous face.

A very well-known and popular deity is Kuwanon¹ (pronounced Kannôn), the goddess of mercy. She is represented with several faces, forty arms, and a thousand hands, and is accordingly called also Senju-Kuwanon-sama (thousand-handed god of mercy). The idol is frequently replaced simply by a decorated altar surrounded by a lattice-work. Kuwanon hears prayers, whether they are addressed to her orally or in writing, and can deliver men from all the dangers of life. If the shrine dedicated to her is too far from the suppliant, he may write his request upon a strip of paper, work it into a ball in his mouth, and then spit it out in the direction of the shrine. If the ball catches on, this is a favourable sign for him, and he departs with his mind relieved. Numerous inscriptions of gratitude for deliverance from the most various kinds of trouble are addressed to the god, and attached to the rails around the altar.

As a rule the Tera (Buddha-temples) are situated, like the Miyas (Kami-halls), at a little distance from the side of the road, in a roomy court or little grove. The approach leads through one or more covered gateways (*mon*), and is a path paved with stone flags, varying in width according to circumstances. In much frequented temples, as *e.g.* that of Asakusa in Tôkio, everything looks like a fair. Along the path, or even the sides of the temple-court, are whole rows of tea-houses, and booths, in which chiefly toys of all kinds are offered for sale at low prices. But even *Yashi* (mountebanks, such as conjurors, sword-swallowers, menagerie-keepers, and numbers of other such performers) find here a place and a public for the exhibition of their performances.

¹ This is the Avalôkitêçvara of India.

On both sides of the lofty portal to a Buddha-temple and monastery may be seen as gatekeepers two exceedingly striking idols carved in wood. They are naked, close-set athletic figures of three or four metres high, which are painted vermilion-red from head to foot, or one of them is painted red and the other green. The pious Buddhist calls them *Ni(w)ô-sama*, the two venerable kings; the free-thinker, more appropriately, Aka-oni and Awo-oni, the red and green devils, for "ugly as sin" is not an adequate expression for their appearance. Their full name is *Ni-ô-kon-gô*, i.e. the two bold, golden kings. If what von Siebold maintains in his Pantheon is true, that they were originally representations of Brahmâ and Narâyana, this only shows again what a subordinate position Buddhism assigned to these supreme deities of the old Indian worship as compared with the Buddhas.¹ The eyes and features of these Ni-ô are distorted, and their whole attitude is rather calculated to repel the visitor from the temple. One of them has his mouth wide open, while that of the other is closed. The first holds a club in the left hand, while the right arm hangs freely down; the other stretches both arms freely out, holding in front of him his flat right hand, as if parrying a blow, while he clenches the left fist tightly. Not unfrequently we observe on the inner side of the Ni-ô-mon (two-kings' gate) two foxes, attendants on these hideous Ni-ô, hewn in stone and sitting on the ground, the emblems of strength and cunning appearing to be combined as sentinels. If several gates succeed each other, as e.g. at the temple of the third Shôgun in Nikkô, other sentinels are as a rule set up. In Nikkô the inner side of the Ni-ô-mon also exhibits these two demon guardians, but in a reverse order. Next comes a court, and then a second gate, called Niten-mon. The two *Niten* guarding it are smaller than the Ni-ô, though with the mouth and eyes similarly distorted, and also differ from them in being not entirely naked. The body of the one on the right gate-post is painted green, that of the other red; but in addition both of them exhibit gilt armour. On the other side of the door on the right hand is the *Raijin* or *Kaminari-sama* (god of thunder) painted red, and on the left hand in deep blue the *Fûjin* or *Kaze-no-kami* (god of wind). These gods I also found to be altogether different from Siebold's representation of them. The thunderer holds in each hand gilt drumsticks of the form and size of the iron dumb-bells used in gymnastics. On his back he bears a great hoop, in which are nine flat drums (taiko) at equal distances apart. Above both shoulders lie gilt lightning-rays, serpentine rather than zig-zag in form, which strike upon the drums. The wind god on the other hand has across his shoulders a sack full of wind, which he grasps with

¹ The illustrations of them in Siebold's Pantheon are, like many others, entirely misleading, and convey a very false impression of the grim martial figures which are to be seen at so many temple-gates.

the right arm by the longer and lower end, while his left hand holds the cord that ties the other and shorter end. Then follows another courtyard, and next a third gate, guarded by armed gods, of which again the first on the right hand has a coat of green paint, while the other on the left is painted red. They are called *Yasha* (from the Sanskrit word *Yaksha*), and the gate is named *Yasha-gô-mon*, the gate of the valorous devils. On the inner side of it to the right is a blue archer with bow and arrow, on the left a white axe-bearer. The courtyard which now succeeds ends in a fourth portal without guardians, and then only comes the narrower temple-court, in the midst of which a wide and lofty wooden staircase leads up to the place called *Haiden*. This is the antechamber of the temple, and is used for the performance of devotions. The pulling of a bell, the beating of a drum, or clapping three times with the hands, are the means by which the suppliant first invites the god to grant him an audience. The mysteriously closed *Go-nai-jin* in the background is regarded as the dwelling-place of the deity. The connection between the *Haiden* and the *Naijin* of a temple is called *Ainoma*, and in the more celebrated temples is a richly decorated passage.

The Buddhas (saints), as the most perfect creatures and supreme beings of the Buddhists, have a universal feminine type of countenance. The expression of gentleness and peace of mind is unmistakable. They always appear sitting on the leaves of an expanded lotus-flower. Their various forms of activity are expressed by variations in the position of the hands and figures, sometimes in a very surprising way. At *Nikkô* may be seen, in the middle of the lower room of the *Go-jû-no-tô* (five-storey-tower),—a pagoda of 198 feet high, containing in excellent bas-relief the twelve animals of the Chinese zodiac,—four sitting statues of the most celebrated Buddhas in life size. *Shaka* (*Çâkyamuni*) looks to the north, and stretches forth both hands, as if in benediction; the image of *Mida* (*Amitâbha*) is turned towards the west, in the familiar attitude of meditation, with downcast look, with both hands upon the breast and the fingers pressed together; on the south is seen *Dainichi* (*Vairôtschana*) with the hands on the chest and above each other, so that the right hand clasps the index-finger of the left. This is the allegorical representation of determination, of the carrying out of the law. Finally, we see upon the east side *Yakushi*, raising the right hand in benediction.

As the leader however of the legion of Buddhist deities, *Amida* (*Amitâbha*) is enthroned aloft, "the immeasurably resplendent," the deity of consolation, help and deliverance, to whom thousands of idols of every size are dedicated throughout Japan.¹ Three colossal statues especially have a great reputation, the *Daibutsu*

¹ *Amida* and *Xaca* (*Shaka* = *Çâkyamuni*) figure too in the *Epistolæ* of the Jesuits, as the *Japoniorum Dii par excellence*.



DAIBUTSU (GREAT BUDDHA) AT KAMAKURA.

(Great Buddha) of Kamakura, Nara and Kiôto. The best known and most visited is the Daibuts(u) of Kamakura, to the south-west of Yokohama. This extremely interesting idol, an illustration of which is annexed, has a total height of 54 shaku (feet) or 16·3 metres, and the copper bronze of which it is composed a weight of 450 tons.

The Lotus-flower (*Nelumbium speciosum*), in Japanese Hasu or Renge, examples of which in bronze may here likewise be seen in two vases, was originally sacred to Çiva. So too the sacred tanks found in connexion with Buddha-temples and monasteries, with their lotus-flowers, fish and tortoises, did not originate with Buddhism, but were in fact common in India before it. Thus it is recorded that Râhula, the son of Siddhârtha, a boy of seven, was sitting near his mother Yaçôdharâ by the lotus-pond and feeding the fish with rice, when foreign merchants arrived bringing news of his father.¹ The *Ficus religiosa* also, a tree which does not flourish in the north-east monsoon district, was sacred in India and dedicated to Çiva even before Siddhârtha was enlightened beneath it and became a Buddha. Besides the lotus-flower, the Skimmi or Star-anise (*Illicium anisatum* L., or *Illicium religiosum* S. and Z.) is also sacred to Buddha in Japan. As the Kami in the Shintô-temples are rejoiced by green boughs of the Sakaki (*Cleyera japonica*), so the vases in the Buddha-temples are filled with boughs of the evergreen Star-anise, a little tree belonging to the family of the Magnoliaceæ, which is accordingly frequently found in the Teras, as the Sakaki is in the Miyas.

The persecutions of the Buddhist priests by Nobunaga, and the introduction of Christianity in the second half of the sixteenth century, inflicted indeed a serious blow upon their cause; but under the Tokugawas it took a fresh hold, although its earlier power and influence never returned. Iyeyasu belonged to the Yôdô sect, and expressed the wish that his successors should remain true to it. In commemoration of his preservation no less than eighteen times from mortal peril, he built eighteen splendid temples. By his edict the bonzes were appointed to keep the registers and to officiate at funerals, even those of the Shintôists. He also favoured ancestor-worship, and thus for centuries the worship of the Kami and Buddhas went on side by side, and just as in China the people combined ancestor-worship and Buddhism, so was it in Japan also until recent times. These have deeply

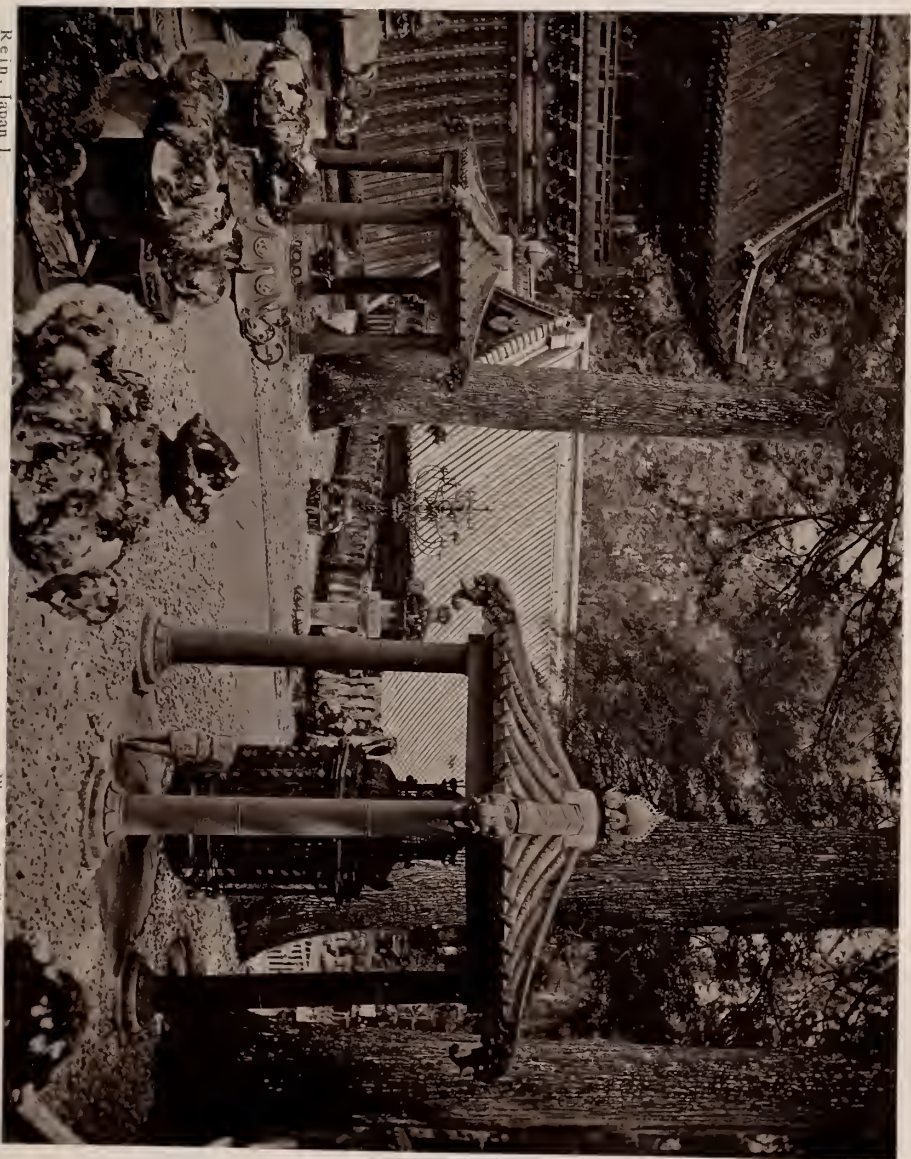
¹ In Buddhism, however, the noblest and loveliest of all water-plants attained a higher symbolical meaning. The lotus-flower, especially the white one, is the symbol of purity and perfection. As the buds of the lotus rise from the mud of the water-tank and unfold, at various heights, their charming leaves and flowers, in whose pure and lovely tints no trace can be observed of the filth from which they spring, so the soul of man, is according to Buddha, elevated by its own power and activity, until it passes as a Buddha fleckless into Nirvâna. Accordingly all idols of Buddha are made to rest upon opened lotus-flowers.

shaken religious life as well as many other things, without, as in political and social matters, laying fresh foundations.

"Until the epoch of the Restoration, the credulity of the people and their confidence in the power of the gods were very great," wrote a former Kami-priest a few years ago in a Japanese newspaper, and then continued: "There was hardly an instant when one did not hear hand-clapping, drum-beating and praying. Whether it was this sect or that, a Kami (Shintô-god), or Hotoke (Buddha-god), an idol of wood, clay or stone, the people worshipped it, prayed to it, and offered it rice, flowers, tapers, etc. The very pious prostrated themselves and touched the ground with their foreheads, hoping that thus their prayers would be the sooner heard, and repeated: *Namu Amida Butsu*, or *Namu miô-hô-ren-ge-kiô*, or *Takamagahara ni kami todomari*." ¹

The year 1868 was, as we have already indicated, a momentous year for Buddhism. After the reduction of the former revenues of the old feudal lords and their vassals, the Samurai, had been successfully carried out, efforts were directed in like fashion against many Buddhist temples and monasteries, and their incomes were reduced to doles and benevolent gifts. This partly happened owing to the attempt to exalt the importance of the Mikado and to give a fresh impulse to Kami-worship, for the aim of the latter and of its most zealous representatives has always been the attainment of political objects only. Special officials had to make investigations wherever an old Shintô-temple had gradually made way for the worship of Buddha, and where there was but a suspicion of right, the Kami was replaced in his hall. Even from the higher mountains such as Tate-yama, Haku-san and others, the statues of Buddha were, in 1873 and 1874, removed from the small temples and replaced by mirrors and Gôhei. In the famous temple of Kômpira, now called Kotohira, in Sanuki, the announcement appeared upon a board in 1875, that the usual Shintô-prayer must be used instead of the invocation to Buddha. In other respects things have remained there much the same as hitherto. As before, pilgrims and mendicants still flock thither; only now Kannushi instead of bonzes sit there, and sell for gold and good words the O-fuda or indulgences. The common people, devoted to Buddhism, saw the removal of their gods with regret, but having been accustomed for centuries to slavish subserviency, everywhere submitted to the commands of the authorities. The bonzes naturally took the matter much more to heart, and it is

¹ *Namu Amida Butsu*: these Indian words meaning "Hail to the eternal splendour of Buddha," form the usual prayer of the Buddhists. Instead of it the Nichiren sect use the Chinese transliteration, *Namu miô-ho-ren-ge-kiô*, "Hail to the salvation-bringing revelations of the law," from one of the earliest canonical writings. The prayer of the Shintôists begins with the old Japanese words, "*Taka magahara ni kami-todomari*," *i.e.* "O Kami, thou who art enthroned in the highest space of heaven!"



Kein, Japan I.

TEMPLE COURT AT NIKKO.

Hodder & Stoughton, Publishers, London.

Phototype by Strumper & Co., Hamburg.

said that in some cases they preferred to consign their temples to Nirvâna rather than to the hands of Shintô-priests. Thus on New Year's night, of 1874, I saw the finest temple in Tôkio, that of Zôzôji, in Shiba, built by Iyeyasu, perish by the flames, together with its ancient art treasures, shortly after its transformation into a Miya had been ordered.

These efforts on the part of the government to supplant Buddhism by Kami-worship have fortunately been very considerably relaxed. It was, indeed, a very short-sighted and vain attempt, and there is hardly any religion which is more hollow and less able to afford satisfaction than Shintôism. Compared with it, Buddhism, if we strip off its coarse idolatry, is an exalted religion. It appeals to religious sensibility, to the heart of man, and therefore it was able to strike such deep roots among the best portions of the Japanese people. But there is another reason that makes the revival of Shintôism impossible. As long as the Japanese people, withdrawn from foreign influences, was kept in slavish subjection, and the Mikado lived in such retirement that only a few of his subjects ever happened to see him, the old myth of his divine descent with all its consequences could be kept up ; but this belief could not but disappear more and more, when the monarch tore the veil and showed himself like other men. Since then the awe-struck reverence which previously did not even dare to utter the name of the ruler, has been gradually transformed into simple loyalty, which recognises and performs all the duties of a good citizen towards the ruler of the country, but is far from deifying him.

Among the more educated classes of the Japanese, the better portion are guided by the ethics, the other by the scepticism of Kôshi (Confucius) and his disciples. Widely diffused religious indifference and formal atheism are the consequences. With regard to Christianity, most of them at present occupy a position of indifference. The philosophical minds acknowledge the beauty of Christian morals, but regard the superiority of the Christian people as the result of causes lying outside religion. They compare the morality of the foreigners in the treaty-ports and elsewhere with that of the Japanese people, and say with justice ; " You foreigners certainly cannot maintain that the Bible has much influence upon you. You are there exhorted to be peaceable, sober and chaste, to render unto every one his own, to cherish no malice, not to bear false witness, not to slander any one, to show yourselves humble, etc. ; and you do the exact opposite of all this."

There are but few among the bonzes of the various sects who understand the history and dogmas of their religion. It is to externals that they cling, and it is for the sake of these that they mutually hate and despise each other, without discussing them publicly or in writing. The ascetic tendency in Buddhism never found much support among the Japanese, with their delight in life

and love of pleasure ; moreover, the practice and theory of ancestor-worship operated powerfully against it. Instead of following Çâkyamuni's plain and earnest exhortations to self-knowledge and a pure life, most Buddhist priests of modern days content themselves with external observances, in part ridiculous, and betray an astonishing ignorance, if they are asked for information as to their religion. The superstitious masses, equally ignorant of religious matters, are, however, captivated by external pomp and the numerous ceremonies with which the unmeaning festivals of the saints are celebrated by the priests.

A reform and revival of Buddhism appears to those who are well acquainted with the facts and have reflected upon them, to be as impossible as that attempted in the case of ancestor-worship. Christianity is alone adapted to give complete satisfaction to the deep religious yearning, which still exhibits itself upon various occasions among the better part, the heart of the people, and to be their faithful guiding star in their spiritual awakening. The circumstances are now essentially different from what they were 300 years ago, and the increase of the converts is incomparably less. Only a few Samurai have as yet openly adopted Christianity, but they include men who are highly esteemed by their fellows for their learning and the purity of their lives. Among the people, however, the missionaries who are good speakers and are masters of the language, have always a large number of attentive hearers, and are forming congregations, which justify the largest expectations.

The greatest hindrances in the way of the preaching of the Gospel have disappeared ; and the country is more and more approximating to complete religious liberty. Yet the missionaries have no lack of difficulties with which to contend ; the greatest and most lamentable of them being not so much the indifference of the heathen Japanese, or the variety of Christian confessions, as the indifference, nay even the enmity, towards Christianity of many foreigners, who give utterance to their feelings by word and deed. The Japanese will, however, gradually learn to distinguish between those who merely bear the name of Christians, and those whose thoughts and acts are guided and ennobled by Christian doctrine, and will no longer estimate the value of Christianity by the former.

III.

TOPOGRAPHY.

THIS section is, as its title indicates, devoted to a general view and a more particular description of Japanese localities. We have already called attention to the slight construction of their houses, and the frequent conflagrations to which they are exposed. If we survey one of the larger Japanese towns from a higher standpoint, it has the aspect of an indistinct sea of houses, in which, as the height of the buildings varies but slightly, we can discern very little except the broad greyish-black roofs without chimneys, interspersed with the white-pointed gables of the fire-proof go-downs (see p. 418) (*kura* or *dozô*). The only objects that rise somewhat above these, although they temper to but a small degree the great monotony of the scene, are the singularly shaped, but comparatively rare, pagodas (*tô*, tower), with their parallel, over-hanging roofs of from three to seven storeys, and their screw-shaped tops—but a small equivalent for church towers and minarets—and the heavy temple-roofs, which have been not inaptly compared to a turned-up felt hat. Much more is done to break the monotony by the picturesque groups of trees, and even the small groves, which surround many of the temples, and delight the eye with their lovely foliage.

As the Japanese build in pretty much the same fashion throughout the whole country, the interest which the visit to the first town secures us, through the charm of novelty, is not preserved to the same extent as in other countries. He who has seen one Japanese town has seen them all; the only difference being that one appears somewhat cleaner, less poverty-stricken and less smoky than another.¹ No *machi* can bear even distant comparison with the prosperity and external neatness which, in addition to many other things, so pleasantly surprise one in many a European town. The streets are only occasionally paved, and it is but rarely, except in the case of the Samurai dwellings, that a nicely kept garden is to be seen.

As a rule, every family, even the poorest, inhabits a house of its

¹ It has been maintained that this slight and mean kind of building employed in Japanese wooden houses, is explained by the frequent earthquakes, against which they furnish the greatest protection, though others, *e.g.* the English engineer Brunton, do not share this view.

own. The size of a Japanese town was formerly never measured by the number of its inhabitants, but always by its length and breadth and the number of its houses. If the latter be multiplied by four, we obtain with approximate accuracy the number of its inhabitants, as one family frequently occupies several houses at a time, and these are of course reckoned. A few examples may serve to indicate the proportion of inhabitants to the houses. According to Japanese accounts :

| | | | | | | | |
|-----------|--------|-------------|--------|-----------|-----|------------|--------|
| Matsuye | 8,700 | Houses with | 38,400 | Inhab. or | 4.4 | Inhab. per | house. |
| Hiroshima | 19,000 | " | " | 75,800 | " | 4.0 | " |
| Niigata | 9,820 | " | " | 34,000 | " | 3.45 | " |
| Kiôto | 63,217 | " | " | 230,000 | " | 3.6 | " |

Most of the larger towns of Japan were formerly the capitals (Jôkas) of Daimiôs. Their size was as a rule proportionate to the revenues of these princes. For this reason, and also because of their historical importance, the Topographical Map gives all the former Jôkas and distinguishes them by a flag (幟), while when they are mentioned in the text I have also given the family name and income of the Daimiôs who dwelt in them.

The order in which we have arranged our brief topographical description and statistical view, is that of the districts and provinces, as they have already been given at pp. 9-12. They are based upon our own observations, upon information gathered on the spot, upon other descriptions, so far as they exist, and upon the official work *Nippon Chishi Tei-yô*,¹ which appeared in 1874-79 in eight volumes. The numbers of inhabitants are for the most part those of 1875.

I. THE GO-KINAI, OR THE FIVE HOME-PROVINCES,

Within which lay nearly all the imperial capitals, which long formed the heart of the empire, and furnished the revenues of the ruling house. It is the classic ground of Japanese history, and was, with its numerous ancient temples, the original seat of Japanese scholarship and the starting point of civilization.

Of the five states of the Kinai, Yamashiro and Yamato are the most easterly, they extend from north to south and are for the most part mountainous, particularly the woody Yamato, which in the south projects like a peninsula towards Kishiu, and here includes Ômine and other lofty mountains. Settsu and Idzumi enclose the Idzuminada; Kawachi (*i.e.* between the rivers) forms, to the east of this bay and to the west of Yamato, a narrow strip, extending from Yodo-gawa in the north to the distance of four or

¹ Chi=the earth; Shi=information, instruction; tei-yo=principal, chief; *i.e.* "General Geography of Japan."

five miles from the Yoshino-gawa in the south, and until the time of the 41st Mikado formed one province together with Idzumi (see p. 7, note). Settsu was then still called Naniwa-dzu (Harbour of the Swift Waves).¹

The least extension of the Go-kinai lies between Ôtsu on Lake Biwa and Ôzaka in the direction of the river Yodo, which with its tributaries waters the most fertile portions of the district and marks out the main lines of communication. Besides the ordinary agricultural products, the Go-kinai produces the best tea, abundant wood, good building stone, especially excellent granite in Settsu and Yamashiro, paper, silk-stuffs, bronze, porcelain, woven goods. It is rich in the attractions of landscape, and has several much frequented baths, especially Arima in Settsu.

The total population amounted in 1875 to 2,075,916 souls, who were distributed as follows: Yamashiro 433,706 inhabitants, Yamato 430,734 inhabitants, Kawachi 246,906 inhabitants, Idzumi 219,132 inhabitants, and Settsu 746,428 inhabitants. Of the towns, Ôzaka and Kiôto have over 200,000 inhabitants, Sakai, Hiôgo, Nara, Fushimi over 20,000, and Kôriyama, Amagasaki, Nishinomiya, Tennôji over 10,000 each. The administration of the Kinai is divided between Kiôto-fu and Ôzaka-fu, Hiôgo-ken, Sakai-ken and Nara-ken.

1. *Yamashiro*, the northernmost province of the Kinai, situated between Yamato, Kawachi, Settsu and Tamba, contains the following towns:—

Kiôto,² *i.e.* capital, or Saikiô (western-capital), as it is also frequently called in modern days, in opposition to Tôkio, is the third largest town of Japan. It extends in the northern portion of the fertile plain of Yamashiro, in the form of an ellipse, running north and south, of 1 ri 24 chô in length and 1 ri in breadth, and is traversed on the eastern side by the Kamo-gawa. Its geographical position is 35° 0' N. and 135° 30' E. long. (4° 2' west of Tôkio). The smaller and eastern portion of the town rises gradually from the left bank of the river to the steeper wooded parts of a range of heights running east and west, the Higashi-yama or Eastern mountains, which afford magnificent prospects over the town and its environs. Not only on this side, but also towards west and north, the town and plain are enclosed by wooded mountains, which, as in Atago-yama on the west side and Hiyei-zan in the north-east, attain a height of over 800 metres. Kiôto numbers at

¹ See the map in *Kôcho Enkaku Dzukai* by Ôtsuki Nobuyuki, and Mr. Krien's translation in the 6th No. of the *Deutsche ostasiatische Gesellschaft*.

² Kiôto, or more correctly Kiyôto, *i.e.* capital, is the Chinese equivalent for the original Japanese designation Miako (Miyako), as we find it in almost all the older books about Japan, though nowadays we scarcely ever hear it even from the natives. As at present Yedo is the Miyako proper, or as there are three Miako or Fu, this designation for Kiôto is quite unsuitable. Kiôto was formerly also called Keishi.

present 1,700 streets, 63,217 houses, and 230,000 inhabitants. It possesses 93 Kami-halls and 945 Buddha-temples, including many of great celebrity.

In the year 794 Kiôto (at that time a small place called Uda-mura) was chosen by Kuwammu-Tennô as his place of residence, and so continued uninterruptedly until the restoration in 1868, when the present Mikado removed to Yedo. During this long period of over a thousand years it was the intellectual and—until Ôzaka and Yedo wrested the precedence from it—also the material centre of the country. In art manufactures, especially in the silk, metal and ceramic industries, Kiôto still holds the first place among the towns of Japan, surpasses all in the regularity and cleanliness of the streets, and above all in its historic associations; for here and far in the country round it lies the classic ground upon which the most interesting part of Japanese history ran its course.

Kiôto is of a much more regular architectural construction than most of the towns in the country. Its streets are indeed not very broad, but they are perfectly straight, and usually cross each other at right angles, running parallel to the axes of the elliptic plane from north to south and from west to east. The names of the most important streets running east and west have reference to the order in which they succeed each other, reckoning from the north, viz. Ichi-jô, Ni-jô, San-jô, Shi-jô, Go-jô, Roku-jô, Shichi-jô (the 1st, 2nd, 3rd, 4th, 5th, 6th, 7th Street). There run in correspondence with them on the east side a number of bridges across the Kamo-gawa, among which the bridge of the Third Street, the Sanjô-bashi (or Sanjô-no-ôhashi) may be particularly mentioned. This is the most famous, the oldest, and the finest bridge, and from it distances are measured; it is a stately wooden structure of 200 feet in length, built by Hideyoshi (Taikô-Sama) some 300 years ago. The Kamo-gawa, celebrated for the clearness of its water, which only completely fills its bed in rainy weather, but at other times forms numerous islets, is in the heat of summer a point of attraction to thousands, who enjoy the cool of the evening upon its banks and in the temporary houses of entertainment erected in its bed.

Among the streets which run from north to south we may mention Muro-machi (b, b, b), which runs through the middle of the town, Tera-machi (a, a, a) to the east, and Sembon-dôri (c, c, c) to the west of it, as well as the shorter street situated entirely in the northern quarter of the town, and the Karasumaru-dôri (d, d) immediately to the east of Muro-machi.

In the north-eastern quarter of the town, removed from traffic and noise, stands the former residence of the Mikados. It formerly bore the name of Hei-an-jô (palace of peace), and subsequently acquired the name of Gosho (exalted palace), or Kinri-Gosho, and was by foreigners usually called Dairi (the great interior), by which name the Mikado himself was also designated. To the residence

belong, besides the Goshô itself, the Sentô-goshô or palace, where the ex-Mikado used to live in retirement after his abdication, the dwellings of the other members of the imperial family, as well as the gardens belonging to them and to the Goshô, and finally in the outer circuit the dwellings of the Kuge. The Mikado's palace castle is a large and spacious building of the wood of the Hinoki (*Chamæcyparis obtusa*), and roofed with the bark of this tree, the fineness of the mats and sliding partitions within alone exhibiting the modest splendour of princely residences in Japan. It is a labyrinth of courts, passages, and spacious apartments, with mats and movable partitions. The park-like garden, laid out with the well-known taste of Japanese landscape gardening, is very much neglected, as was remarked by Baron Hübner, to whom we must refer for a fuller account.

The access to the residence, including most of the Kuge-dwellings, was through nine gates, which were placed at the outlets to the streets, without being connected by walls and ramparts.

To the south-west, and at some distance from Hei-an-jô, is Nijô, the castle of the Shôguns, where formerly lived the governor of the town, who according to Iyeyasu's regulations must always be a powerful Fudai-Daimiô and general. The administration of Kiôto-fu has now been located here. The entire arrangement of this spacious castle, which was built by Taikô-Sama, its strong outer wall, heavy gates and portals, the numerous sculptures and other decorations on the beams, roofs, and walls grey with age, indicate that the might and wealth of Japan were represented here and not in the Goshô. Nijô lies 35° 0' North, 4° 2' West of Tôkiô, and 45 metres above the sea.

The part of the town to the north of Nijô and to the west of Hei-an-jô is the quarter of the silk-weavers, and is called Nishi-jin (west camp). The most noteworthy quarters on the eastern bank of the Kamo-gawa are called Awata, Gion-machi, and Kiyomidzu. Through the first of these runs the road to Ôtsu, and through this to the favourite temples and tea-houses, which are girdled by the steeper woodlands of Higashi-yama, and furnish from their sheltered terraces magnificent views of the sea of houses in the town, and the sunset behind the western mountains. Awata is the seat of the earthenware and enamel industries, Kiyomidzu of the porcelain and doll-manufactories.

Among the most remarkable temples on the eastern side of Kiôto are the following, proceeding from the south (of the town of Fushimi) to the north : Inari (a), Daibutsu (b) and Sanjû-sangendô, Kiyomidzu (c) and not far away the great pagoda, Kenninji (d), Gion-yashiro (e), Chion-in (f) with the great bell, Ginkakuji (g). On the right bank of the Kamo-gawa, beginning at the lower end of the Muro-machi, must be mentioned : Higashi-hongwanji (A), and to the west Nishi-Hongwanji, Honkokuji (B), Bukkôji (C), Honnôji (D), Shôkokuji to the north of the Goshô, Daitokuji (E),

and Kinkakuji still more to the west. At a greater distance Hiyei-zan in the north-east, Kurama-yama in the north, and Atago-yama in the north-west of the town, are especially noteworthy. Further north of the town rise Kurama-yama, Hirane-yama, and Mikuni-yama, nearer and to the west Arashi-yama; the latter place, situated on the left bank of the Katsura-gawa, is much visited, especially in spring, for the sake of the Sakura-trees, which then unfold their magnificent flowers, and are very famous.

Kiôto is now connected with Ôzaka by a railway, which has been extended to Ôtsu. From Kiôto to Tôkio along the Tôkaidô is 132 ri, along the Nakasendô 138½ ri, to Ôzaka through Fushimi 13½ ri, to Nara 10¾ ri, to Tsuruga on the Sea of Japan 30 ri.

Fushimi, a low-lying town with 23,000 inhabitants, on the right bank of the Uji-gawa, is 2½ ri east of Kiôto, with which it is connected, and whose suburb and port on the Yodo-gawa it may be considered. Its favourable position as the very vestibule of Kiôto, Ôtsu, and Nara, secured for it great importance, and often made its possession the subject of bloody conflicts. The Tokugawa Shôguns possessed a castle in Fushimi. *Yodo*, below Fushimi, in the fork between the Kidzu-gawa and Uji-gawa, which here changes its name into the Yodo river, lying opposite the mouth of the Katsura-gawa, was formerly a Daimiô-seat (Inaba) with 6,000 inhabitants. *Uji*, on the left bank of the Uji-gawa (Yodo-gawa), above Fushimi, and lying on the road from Kiôto to Nara, produces the best tea; it has 2,550 inhabitants. *Yawata*, a town of 5,000 inhabitants, with a celebrated temple of Hachiman, is situated on an elevation to the left of the Yodo-gawa, below the mouth of the Kidzu-gawa. *Kidzu*, on the river of the same name, and lying on the road from Uji to Nara, east of Uji, has 4,350 inhabitants.

2. The Province of *Yamato*. It is almost as large as the other remaining provinces of Kinai put together, though owing to its mountainous character it is but thinly inhabited. Its boundaries are Yamashiro, Kawachi, Kii, Ise, and Iga. The old chief town Nara, formerly the residence of the Mikados, one of the oldest towns in the country, with celebrated temples and groves, the tombs of several Mikados, and other historic sights, lies 32½ kilometres east of Ôzaka, and about as far south-south-east of Kiôto in 34° 1' N. and 3° 56' W. (Tôkio). The town extends itself in a small plain, and has about 6,000 houses and 21,500 inhabitants. Among its most remarkable temples is the Tôdaiji, in which is the celebrated Amida Buddha (Nara-no-Daibutsu). This is formed of copper bronze, nearly two centimetres in thickness; sits in the usual Oriental fashion on an opened Lotus-flower, and is 53½ shaku (16.2 metres) high. It is undoubtedly the largest statue of Buddha in the country. It dates from the eighth century, and was erected by Shômu-Tennô, the 47th Mikado. In Kasuga-no-Yashiro,

a magnificent sacred grove, is a deer-park, said to have already existed for more than a thousand years, and in which *Cervus Shika* is preserved in considerable numbers.

Most of the other towns of the province of Yamato are unimportant. We may note the following, which were formerly seats of Daimiôs : *Kôriyama* (Daimiô Matsudaira, 151,288 koku) with 15,000 inhabitants, *Koidzumi* (Katagiri, 11,100 koku) with 2,100 inhabitants, *Takatori* or *Tosa* (Uyemura, 25,000 koku) with 3,000 inhabitants, *Shibamura* or *Hase* (Ota, 10,000 koku) with 2,000 inhabitants, *Yagimoto* or *Yanagimoto* (Ota, 10,000 koku) with 2,300 inhabitants, *Shinjô* (Nagui, 11,000 koku) and *Yagiu* (Yagiu, 10,000 koku) with 1,800 inhabitants. Besides these, we must note in the basin of the Yoshino-gawa, on the road from Wakayama, in Kiushiu, to Ise, the following places : *Gojô* with 3,500 inhabitants, the first town in Yamato on the right bank of the Yoshino ; in the north Kongô-zan is visible, whence is obtained the garnet (pyrope) sand, used in the polishing of rock crystals ; *Shinoichi* with 3,000 inhabitants, *Yoshino* with 1,400 inhabitants, once the residence of the anti-emperors, a famous old place with many *Sakura* (*Prunus pseudocerasus*), and an old Shintô-temple. Not far from this place is the tomb of Go-Daigô-Tennô (p. 258), who here represented the dynasty of the south. From Yoshino pilgrims usually begin the little expedition for the purpose of ascending the beautifully wooded Ômine, which rises to the south-east. At a distance of some hours from Yoshino is manufactured the Yoshino-gami (Yoshino-paper), which is much used in the lacquer manufacture, and is known throughout the country.

3. The Province of *Kawachi*. The largest place, *Yao*, to the south-east of Ôzaka, has only 3,500 inhabitants. *Tannami* (Takagi, 10,000 koku) and *Sayama* (Hôjô, 10,000 koku), which were once Jôkas, are still smaller.

4. The Province of *Idsumi*. The three most important towns lie along the flat shore, and succeed each other from Ôzaka in the following order, which is also that of their size : *Sakai*, $3\frac{1}{2}$ ri from Ôzaka, with 46,000 inhabitants ; *Kishinowada* (Okabe, 53,000 koku), 8,900 inhabitants ; *Kaidzuka*, 4,300 inhabitants. A second Daimiô (Watanabe, 13,500 koku) lived in the little town of Hakata, to the east of Kishinowada.

Sakai was formerly, until Ôzaka took precedence of it, the first commercial town in Japan. It was here that the father of Konishi Yukinaga (p. 284) carried on the business of a druggist ; and here that Yuranosuke, the Karô (minister) of the former Daimiô of Ako afterwards assembled his forty-six fellow-conspirators, and thence made the expedition against Yedo (see a fuller account under Tôkio). Here also took place, in 1868, the assassination of the eleven Frenchmen (p. 357). Like Ôzaka, Fushimi, Nara, and various other considerable towns in the empire, Sakai belonged to the domain of the Tokugawa, and was under a governor.

5. The Province of *Settsu*, the most populous and now the most important in the Kinai, rises towards the west from the flat strand between Hiôgo and Ôzaka into wooded mountains of six or seven hundred metres in height, and is in these parts, like Yamato and Yamashiro, rich in natural beauties. *Ôzaka*, the chief town, is situated in $34^{\circ} 41' \text{ N. lat. and } 135^{\circ} 45' \text{ E. long. (} 4^{\circ} 16' \text{ W. from Tôkio)}$ where the Yodo-gawa falls into the Idzumi-nada. It has 78,800 houses, and 275,000 inhabitants, without Tennôji, with which the population amounts to 300,000. This south-eastern portion of Ôzaka (a kind of suburb), is given in the Nippon Chi-shi Tei-yô, and on Japanese maps as a separate town, with 18,000 inhabitants. It is named after a celebrated and much visited temple, the full name of which is Shi-tennô-ji, *i.e.* temple of the four dêva kings.¹

The history of this *tera* is associated with the introduction of Buddhism. In its Kondô, or golden hall, is said to be still preserved a gilded copper Buddha-statue, long ago presented to Japan by the King of Kudara.

The town of Ôzaka stretches along the low delta at the mouth of the Yodo-gawa, four-fifths of it lying on the left or south bank of the river, numerous canals from which intersect the town. Its greatest extension is from east to west, and its limits are, to the east the castle in the upper town (Uyemachi), to the west Kawaguchi (river-mouth), the strangers' quarter, in which also the government buildings of the Ôzaka-fu have been erected. The chief business quarter of the town lies between the two extremes here mentioned; the mint, which was established under English superintendence in 1868-1872, lies in the northern portion of Ôzaka, to the right of the river, while at a greater distance is the railway station. From its numerous canals and bridges Ôzaka has in recent times been sometimes called the Japanese Venice. Kôrai-bashi, the Bridge of the Coreans, is considered the centre of the town, and from this point all distances are measured, as they are at Kiôto from the Sanjô-bashi, at Tôkio from the Nihon-bashi.

The most popular temple in Ôzaka is called Temmangû. It is situated on the north bank of the Yodo-gawa. On the road from Ôzaka to Sakai, at a distance of 2 ri from Ôzaka, may be observed on the left the extensive district of the Sumiyoshi, a celebrated old Shintô-temple, particularly frequented by fishermen, who are supposed to be under the special protection of the deity. The temple grounds are exceedingly interesting. In sacred tanks, beneath lotus-flowers and other water-plants, numbers of tortoises and gold fish live upon the offerings of the visitors, who buy a

¹ The Shi-tennô, who according to the Indian myth share the four sides of the great mountain Sumera, in the Himalayas, and under Indra protect the universe, are called Bishamon (Vaiçravaṇa), the king of the north side; Jikoku-tennô (Dhṛitarâschtra), the king of the east side; Zôshô-tennô (Virûdhaka), the regent of the south side; and Kômoku-tennô (Virûpâkscha), the protector of the west side.

special kind of rice-cake to feed them with, summoning them by the clapping of hands. Magnificent trees of *Laurus Camphora*, *Sophora japonica*, and *Melia Azedarach*, adorn one portion of the broad temple-courts.

The population of Ôzaka, as well as that of Kiôto, if we may place confidence in the earlier statistics with regard to it, has fallen off considerably since the Meiji government. The harbour of the town, like that of Tôkio, is too shallow to allow the larger ocean-going ships to enter; and accordingly the entire foreign trade has, in the case of Ôzaka, fallen to Kôbe, which lies near and is reached by railway in an hour. Hence the handsomely built foreign quarter in Kawaguchi was not able to compete with Kôbe.

Any one travelling from Fushimi in a flat-bottomed boat down the Yodogawa to Ôzaka, is struck immediately on entering the town by the strong encircling walls of the old castle upon the left. Its varying fortunes in the age of Nobunaga, Hideyoshi, and at the beginning and end of the Tokugawa Shôgunate is well known. Iyeyasu regarded this stronghold and the castle of Fushimi as the keys of Kiôto, and directed that they should be confided only to thoroughly trustworthy hands. Even in ruins, the once powerful structure, with its mighty encircling walls of great square granite blocks, presents an imposing appearance.

Ôzaka has nevertheless maintained its old rank as the first commercial town of the empire, at least as regards internal intercourse. Here dwelt, and still dwell, the great merchants, who formerly, as bankers and creditors of the territorial princes, collected in their warehouses the most important products and necessities of the country, in particular rice, cotton, and silk-stuffs. The favourable position of the town, in the middle of the country, and as the natural harbour and outlet of Kiôto, at once the seat of government and a manufacturing town, assured to it the great commercial importance to which Kaempfer already called attention. The resources and business knowledge of its merchants will do all that is possible to maintain it.

The difficulties of disembarkation which Jimmu Tennô experienced in 560 B.C. near the modern Ôzaka, in consequence of the violence of the waves (*Nami-haya*), gave the town its earlier designation. It was only towards the end of the 15th century that the name *Naniwa*, which is explained as a corruption of *Nami-haya*, was changed for the present name Ôzaka. This is derived from *ôye*, great stream; and *saka*, hill.

Hiôgo-Kôbe, with 50,000 inhabitants, lies 36 kilometres west of Ôzaka. The eastern portion, Kôbe, forming a town by itself of some 10,000 inhabitants, is only separated from the old Hiôgo by the usually dry and pebbly bed of a stream. Kôbe is a new town, magnificently situated, with a deep, safe harbour; its commerce is second only to that of Yokohama, and along its harbour stretches the beautiful foreign quarter inhabited by about 400 foreigners.

Hiôgo, the older and larger Japanese town, enjoyed its greatest prosperity under the Taira, who had a castle here in which they frequently resided. The railway, which begins at Hiôgo, runs through Kôbe to Ôzaka. After leaving Kôbe it passes by the towns of *Nishinomiya*, 8,700 inhabitants, and *Amagasaki* (Matsudaira, 40,000 koku). Other noteworthy places are the former Daimiô-seats, *Takatsuki* (Nagai, 36,000 koku) with 4,300 inhabitants, *Sanda* (Kuki, 36,000 koku) with 2,350 inhabitants, and *Asada* (Aoki, 10,000 koku), the last-named place lying to the north and Sanda to the north-west of Amagasaki, while we find *Takatsuki* nearer to Kiôto on the left bank of the Yodo-gawa. Besides these may be further noted : *Namba* or *Naniwa*, near Ôzaka, with 8,000 inhabitants ; *Hirano*, on the road from Amagasaki to Sasayama in Tamba, on the left bank of the Muko-gawa, a frequently rapid stream, which often does great devastation between Nishinomiya and Amagasaki, where it reaches the sea. Five ri to the north-east of Kôbe, beyond the first mountain-chain, lies the famous watering-place *Arima*, and five ri to the west of Ôzaka lies *Mino* in a charming mountain landscape, justly celebrated for its magnificent waterfall,—which dashes down some 45 metres over a perpendicular granite wall,—as well as for its ancient temples and the magnificent old trees which surround them.

II. THE TÔKAIDÔ, OR EAST SEA ROAD DISTRICT.¹

There are fifteen provinces of this division, all of them, with the exception of Iga and Kai, bordering on the Pacific, along which they form a comparatively narrow band of about 140 ri in length. The Tôkaidô, the famous old country road between Kiôto and Tôkio, traverses the greater number of them. It runs through the beautiful Hakone range, frequently affording a view of the imposing Fuji-no-yama and of the sea, which in many places it closely approaches.

In the flatter and fertile tracts of the country, the cultivation of rice and of other crops is the main industry, while in the hilly districts of Kai and Musashi it is silk-growing, and in those of Suruga and Ise the cultivation of tea. The fisheries also occupy a great number of hands. Kai and Suruga have important paper manufactures ; pottery plays an important part in Owari and Ise, and the manufacture of wooden articles in the Hakone range (Province of Sagami). The principal seats of industrial activity however are the two chief towns of the district, *Tôkio* with upwards of 600,000 inhabitants, and *Nagoya* with nearly 140,000 inhabitants. The next largest towns are *Yokohama* with more than 60,000 inhabitants, *Shidzuoka* and *Senji*, each with over 30,000 inhabit-

* From the Sinico-Japanese words tô=east, kai=sea, dô=road. The Yamato equivalent of the short name would be Higashi-no-umi michi.

ants, *Chôshi* with 25,000 inhabitants; *Tsu*, *Mito*, and *Yamada*, with nearly 20,000 inhabitants.

The total population of these fifteen provinces, among which *Musashi* is the largest and by far the most populous, while *Shima* is the smallest, is 7,650,000. They are at present distributed into the *Tôkio*-fu and eight ken, viz. *Ibaraki*, *Saitama*, *Chiba*, *Kanagawa*, *Yamaguchi*, *Shidzuoka*, *Aichi* and *Miye*. The *Hakone* mountains divide them into a north-eastern and a south-western group, the former of which embraces the six provinces *Sagami*, *Musashi*, *Awa*, *Kadsusa*, *Shimôsa*, and *Hitachi*, and may be called the *Kuwantô* group, while the nine westerly provinces, except the two separated from the sea, are washed by the *Tôtômi*-nada and its arms, and may therefore be called the *Tôtômi*-nada group.

A. The Kuwantô Group.

This is bounded by the sea, *Idzu*, *Suruga*, *Kai* and the provinces of the *Tôsandô*: *Shinano*, *Kôdzuke*, *Shimotsuke* and *Iwaki*. Its main feature is the great fertile plain of the *Kuwantô*, which is watered by the *Tone-gawa* and other rivers.

1. Province of *Musashi*. In this province is situated the capital *Tôkio* or *Tôkei*, formerly called *Yedo*.

The extensive capital of the Japanese empire spreads itself out at the northern end of the shallow Bay of *Yedo* and on the banks of the *Sumida-gawa*, in $35^{\circ} 40'$ N. lat. and $139^{\circ} 47'$ E. long. Its sea of houses rises from the flat shore of the bay, where the troubled waters of the *Sumida* mingle with those of the sea, to a range of flat hills of from 20 to 30 metres high, and with them encloses in a wide curve on the northern and western sides the lower portions of the town lying but a few metres above the sea. The extent of *Tôkio* from west to east is 2 ri 7 chô, and from south to north 2 ri 30 chô; the area embraced in it is nearly equal to that of *Paris*. It includes, however, many waste places and numerous tea and mulberry plantations, so that the population is not correspondingly large. In 1875 *Tôkio* had, according to the trustworthy statements of the *Nippon Chi-shi Tei-yô*, the latest statistics of Japan, 565,905 inhabitants, distributed through 1,177 streets, with 149,383 houses, 1,026 Buddha temples and 104 *Shintô* temples. At present, including the suburbs, there are about 800,000 inhabitants to 200,000 houses. At the time of its greatest prosperity, *i.e.* shortly before the collapse of the feudal system and the *Shôgunate* (somewhere about the year 1860), the town may have numbered a million inhabitants.¹

¹ According to a statistical return by the police of *Tôkio* (see *Petermann's Mittheilungen*, 1879, p. 231) the population was still larger in 1879, viz. 1,042,800 in 237,937 houses; but this may have referred to the larger district of the *Tôkio*-fu.

From the accompanying plan it will be easy to gather a general idea. The town is divided into fifteen districts or *ku*, the names of which with the number of houses contained in them are as follows :

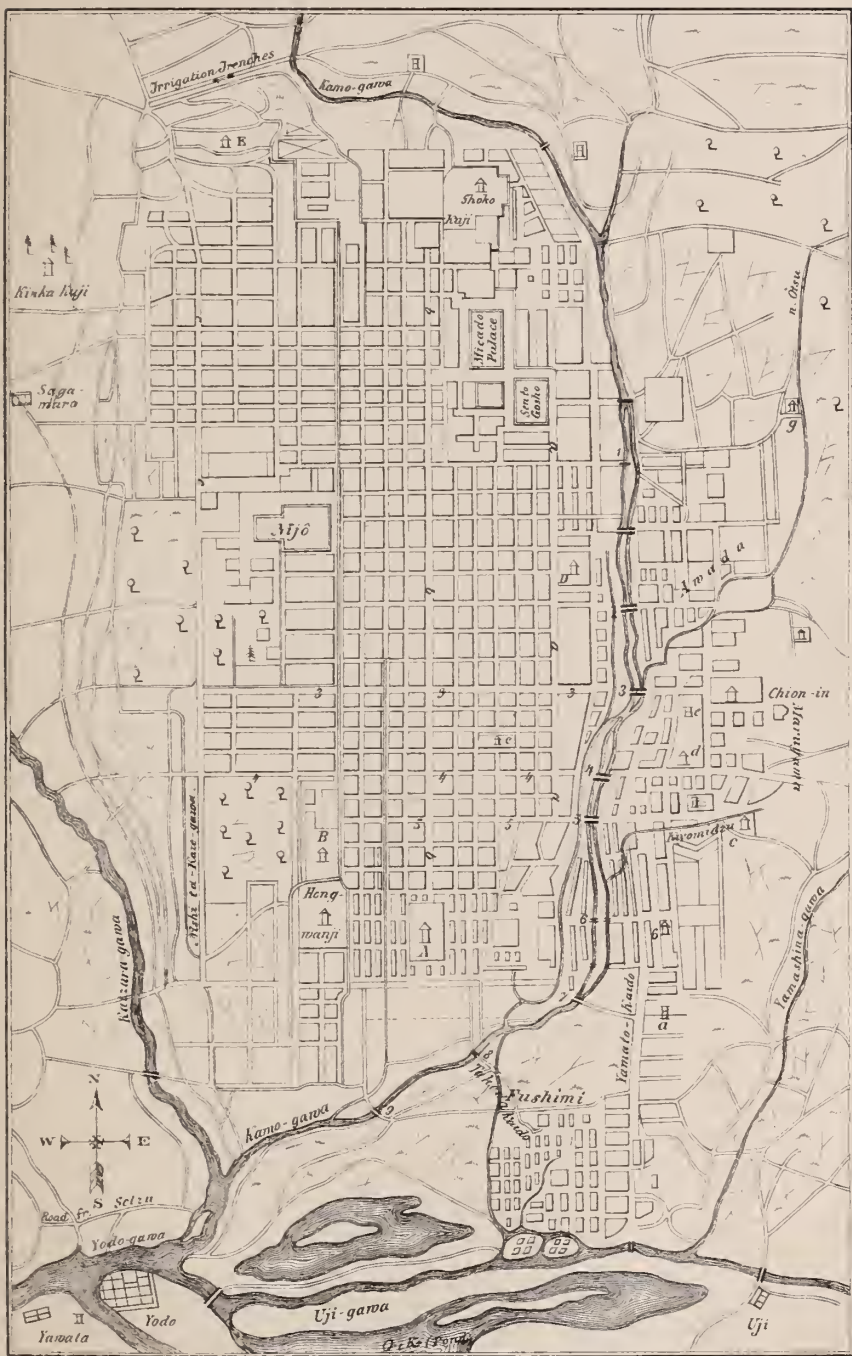
| | | | |
|---------------|---------------|----------------|---------------|
| 1. Kôjimachi | 9,162 houses. | 9. Ushigomi | 8,544 houses. |
| 2. Kanda | 20,785 " | 10. Koishikawa | 8,097 " |
| 3. Nihonbashi | 20,458 " | 11. Hongô | 11,899 " |
| 4. Kiyôbashi | 20,258 " | 12. Shitaya | 13,515 " |
| 5. Shiba | 18,910 " | 13. Asakusa | 22,878 " |
| 6. Azabu | 5,873 " | 14. Honjo | 15,102 " |
| 7. Akasaka | 5,775 " | 15. Fukagawa | 12,698 " |
| 8. Yotsuya | 5,313 " | | |

Kôjimachi embraces the central and oldest portion of the town. Here was situated the O-Shiro or castle of the Shôguns. Built on a low, flat hill, surrounded on all sides by outworks, moated walls and ramparts, and well guarded gates, it formed with its gardens a self-contained whole. Soon after the restoration it perished by fire, like so many other buildings dating from feudal times, and has not yet been reconstructed. The Mikado resides chiefly in the Yashiki of a former Daimiô in the Yotsuya-ku, to the west of the old castle. Our plan shows a second, and indeed a third enceinte, at a greater distance around the O-Shiro, the moats of which terminate eastward in the Sumida-gawa and the Bay of Yedo. Kôjimachi formed the official quarter, the town proper. The numerous Yashikis or Daimiô-residences, which with their outbuildings bordered the streets surrounding the castle, have mostly been converted into departmental offices and other government buildings, partly have had to make room for modern structures. The most remarkable street in this quarter of the town, the oldest street in Yedo, the original Kôjimachi, runs on the south-west side of the castle to Yotsuya-mon. Of the noteworthy buildings of this district our plan shows the German Legation (2), and the much more extensive precincts of the English Legation (3), both shown by shading; also the two Shintô-temples, Shôkonsha (4) in the Kudan (5) (comp. p. 415), the highest portion of the town, and Sannô (1), the Gaimushô or Foreign Office (7), and the Kôgakuriô or College of Engineering (8), as well as the Hakurankai or Museum (13).

The three quarters of Kiyô-bashi, Nihon-bashi and Kanda show, even by the number of houses in a comparatively limited area, that they contain a dense population. Lying to the east of the castle quarter, bordered to the south and north by the two canals already mentioned as flowing eastwards, and to the east by the Sumida-gawa, they form the Machi proper, or commercial town, the centre of traffic. From the Shim-bashi (new bridge) in the vicinity of the railway station, the main street of Tôkiô, called Tôri (Dôri), 90 feet wide, runs eastward, after crossing the Kiyô-bashi, *i.e.* Kiyôto Bridge (1) into the Nihon-bashi quarter and

Plan of Kiôto.

Drawn after a Japanese Plan by K. Leicher.



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Lith. Anst. Julius Klinkhardt, Leipzig

beyond the bridge of the same name into the Kanda quarter. The Sunrise Bridge (Nihon-bashi) is the centre of the town, the distances in which are measured from this point ; here too the most important country roads end in sight of Fuji-san. Shimbashi-dôri, the first portion of that great artery of traffic starting from the station, is a boulevard of 90 feet wide with neat brick houses on both sides. This is the new town ; as yet the only example of the kind in Japan, as elsewhere nothing but wooden structures are to be found. Shimbashi-dôri and a considerable district around it were destroyed by fire in 1872, and afterwards rebuilt upon a new plan. In this part of the town lies also the foreign quarter Tsukiji (2) with the celebrated temple of the Shin sect Nishi-Honguwanji, and adjoining it the Naval College. In the next ku we may mention besides the Nihon-bashi (1), the Yedo-bashi (2) lying still further to the east, a bridge near which the fish-market is held. In the district of Kanda, which is bounded on the north by the Kanda-gawa, a canal which falls at a right angle into the Sumida, may be mentioned the Kanda-bashi (1), and the University buildings or Kai-sei-gakkô. Shiba-ku abuts southward on the Kiyô-bashi and the sea, along which runs the railway and the Tôkaidô to the suburb of Shinagawa. Near the railway station is situated, on an island, the pleasure palace O-hama-goten (4), where the Mikado has so frequently entertained distinguished foreigners. More remarkable is the park and temple-grounds of Shiba, with tombs of the Shôguns, one of the five great public places. Here stood the most famous Buddha-temple in the city, the Zôjôji, which was destroyed by fire on New Year's night, 1874. Still more to the south, on the side of the high road, is Sengakuji (3), the burial-place of the Daimiô of Akô and of the forty-seven loyal Rônin,¹ and close by the temple of the war-god Hachiman. On the town side of Shiba Park (near 5) is a hill, called Atago-yama, which is much visited for the sake of the prospect from it.

¹ The most brilliant instance of feudal loyalty, even to the death, which has been mentioned in passing at p. 327 as well as here, is that of the Forty-seven faithful followers or Rônin. This incident, which made so ineffaceable an impression on the mind of the Japanese, took place in Yedô, at the beginning of the eighteenth century. Asano Takuni-no-kami, lord of the castle of Akô in Harima, having been mortally insulted by the avaricious minister Kôdzuke-no-Suke (pronounce Kôdzkenóske), drew his sword and wounded him. He was consequently obliged to administer seppuku to himself, and received from his oldest and most faithful retainer, Yurano-suke, the office of friendship. The latter was then closely watched by the spies of the minister, who feared his vengeance, but he succeeded in eluding them, and at last appeared one night suddenly before Kotsuke-no-Suke's dwelling with his son, aged sixteen, and forty-five conspirators. The sentinels were cut down, the cowardly minister was dragged from his hiding-place. His head was struck off, and after being washed, was presented at the grave of their master. They then announced what they had done, and awaited their punishment, the seppuku, which the loyal band then performed at Sengakuji, where each of them afterwards had a tomb and a monument erected to him near those of his lord.

Behind it is the burial-place of Tentokuji. Due south is indicated the road to Meguro, a much visited place near the town, with famous temples and tea-houses. To the west of Shiba comes Azabu-ku, and then Akasaka. In the former is situated the Tame-ike pond (1), and the Ministry of Public Works, Kôbushô (2), in the latter the long Akasaka street and Awoyama with the experimental gardens of the colonial government. To the right of the street just named may be seen, in the Yotsuya-ku, Kishiuyashiki, the temporary palace of the Mikado. Higher up and also to the west of Kôjimachi the district of Ushigomi adjoins the Owari-yashiki. This district is reached from Kôjimachi through the Ushigomi gate (1) near Kudan. Other noteworthy features are the Gokokuji temple (6) and the Yodo-gawa, which empties its waters into the Great Canal. The north-west corner of the plan is occupied by the quarters of Koishikawa and Hongô. Here at the extreme end are seen the Nakasendô and Ôji, distinguished for its magnificent situation, its temple-courts, tea-houses and gardens, and much frequented in consequence. In the outer *enceinte*, before the Koishikawa gate (4) are situated the Mito-yashiki, which formerly possessed a splendid park and grounds, on one side a Shintô-temple, and in the background the much more remarkable Buddha-temple Dendzuin (2). Still further away, and somewhat more to the right, lies the O-yaku-yen (1), the Botanical Garden. In the Hongô quarter adjoining the Kanda-ku and the moat are the Kami-hall of Kanda Miôjin (1), the Tôkio Library (2), and the Kaga-yashiki. Its magnificent park and grounds have been laid waste, and replaced by dwellings for foreign instructors. To the east, Hongô adjoins the district of Shitaya, and further towards the Sumida is Asakusa. In the former district is situated the Medical School (1 shaded), carried on under German direction. Still further from the centre of the town, towards the north, we observe the Pond of Uyeno, in which, as also in the wider portions of the castle-moats, wild ducks, geese and cormorants disport themselves undisturbed, while the beautiful park of Uyeno with its temples, Shôgun-tombs, splendid clumps of trees, the dwellings of German instructors, tea-houses, etc., is close at hand. Of the five public gardens and parks Asakusa, Uyeno, Shiba, Fukagawa, Hachiman and Asukayama, Uyeno is the chief. The most splendid temple on this charming spot, that of Tôyei-zan, fell a prey to the flames during the conflicts of 1868, but there are still many remarkable shrines, such as the temple of Gongen-sama, with the great camphor-tree behind it, the tombs of the Shôguns with their rows of stone-lanterns, and the great cryptomerias. Asakusa runs for a considerable distance along the right bank of the Sumida, and is well known in particular for its temples, two of which, Kwannon (3), and Higashi Honguwanji (2), have a high reputation. About the former of these is to be found everything that can attract the sight-seeing crowd and tempt them to spend

their money ; toy-shop keepers, tea-booths, conjurors of every kind, so that the place is like a continual fair. The long shaded building (1) on the river bank is meant to indicate the position of the large rice-warehouses.

On the left bank of the Sumida-gawa are the two quarters of Honjo and Fukagawa. The former of these, opposite Asakusa, presents along the river, in the portion which is called Mukôjima, a centre of unusual attraction in spring, when old and young, gentle and simple, flock thither to admire the flowers of the Sakura trees (*Prunus pseudocerasus*). In Fukagawa there are several temples of great celebrity, as for example, Hachiman (2), Reiganji, (1), Eko-in (3). On the left bank before reaching the mouth was the old battery.

Five large wooden bridges span the Sumida-gawa and connect the quarters of the town upon the left bank with the old towns, viz. Yeitaibashi (1), Ô-hashî (2), Riogoku-bashi (3), Mumaya-bashi (4), and Adzuma-bashi (5). The most important of them is Riôgoku-bashi, in which the principal traffic is carried on. Its name signifies "Two lands bridge," because it connects Shimôsa, to which the left bank of the river formerly belonged, with Musashi.

Tôkio is a new town. Its history is also that of the Tokugawa. Iyeyasu, who towards the end of the 16th century, became lord of the Kuwantô by his victory over the Hôjô, by the advice of his friend Hideyoshi constituted the as yet unimportant town of Yedo (Bay-gate) his place of residence (1598), and forthwith began with his characteristic energy to make it an agreeable place of abode. But it was the victory of Sekigahara shortly afterwards, with its far-reaching consequences, that insured its brilliant future to the new undertaking. In particular, the circumstance that all the princes of the country built their Yashikis here, and had to spend in it a great portion of their lives, with a numerous retinue, was one of the main causes of the rapid development of Yedo. When, indeed, at the beginning of the "sixty years" the influence of the Shôgun rapidly sank, Yokohama, by the aid of foreign capital and foreign energy, as rapidly developed, and when the obligation laid upon the Daimiôs to live in Yedo was abolished, the town was visibly emptied, and its glory seemed to have disappeared for ever. The Mikado, however, in 1869 made it his place of abode, changed its name to Tôkio (East capital),¹ and restored to it new life. Hereupon began a new epoch for this "city of Tycoons," and a new development upon a changed basis. Already has a portion of its streets been constructed of brick, and a foundation thus laid for obviating the danger of fire and for the furtherance of the national prosperity. The time is coming when it will no longer be said, as hitherto, "*Kaji-wa Yedo no hana da*," "the

¹ According to another pronunciation of the two Chinese characters which are at the basis of the word, the town is also called Tôkei (pronounce Tôké).

Fire is Yedo's flower;" but when, even for the solidity of its architecture, Yedo may be called the flower of the cities of Japan.

In earlier times a high degree of importance belonged to several suburbs of Yedo, extending in a circuit of two ri from the centre Nihon-bashi to the main country roads which here terminate. From the large and spacious Yadoyas and other places of entertainment we may infer the activity of intercourse which once prevailed in them. It was here that the Daimiô's processions on their journeys to and from the capital made their first or last halt for the night. Ample provision was made for their proper entertainment and for amusements of various kinds.

When, after the Perry Expedition, the ferment which had made its way into the Samurai class was still further intensified by the opposition between Kiôto and Yedo, these suburbs became the resorts of all kinds of dissolute people, and especially of Rônins, who here over "sake" and in the company of prostitutes plotted how they might best cause embarrassment to the Bakufu, and give expression to their hatred of foreigners. Many a bloody deed of these daring associates was planned in the brothel-quarter of Shinagawa, for this southern suburb, running along the Tôkaidô on the Bay of Yedo, was the most important and animated of all. Even now it still numbers over 10,000 inhabitants. On the Ôshiu-kaidô, *i.e.*, on the west side of Tôkio, we find the suburb of Shinjiku with 4,000 inhabitants; on the Nakasendô, on the north-west side is Itabashi with 3,000 inhabitants, and on the north-east, on the Ôshiu kaidô, the suburb of Senji with 11,400 inhabitants. Including, as is frequently done, these and several less important suburbs in Tôkio, the population of the Japanese capital was in the year 1875 nearly 640,000. It is continually increasing, and will soon again reach the high figure of more than one million inhabitants, which it is said to have attained before 1860, if disease and other causes do not hinder its development.

*Yokohama*¹ and *Kanagawa*. Yokohama which twenty years ago was still a small fishing village, is now a considerable town² with 65,000 inhabitants,³ and of great importance in foreign trade, an outpost on the route from San Francisco to Hongkong or Shanghai, and the north-eastern terminus of the route taken by the steamers of the Peninsular and Oriental line from Southampton, and those of the Messageries Maritimes from Marseilles. There is accordingly much life and activity in its fine, spacious harbour.³ Mail steamers are coming and going, ships of war from all the different maritime powers have their rendezvous here,⁴ while the

¹ The name comes from Yoko, "cross," and hama, "a flat beach."

² Including 2,950 foreigners, chiefly English and Americans.

³ It has a depth of from 12 to 15 metres, and is thus more than adequate for the largest vessels.

⁴ Among the Japanese people they are frequently known only as bum-bum-

commercial navies, which, as well as the steam packets, carrying merchandise, are abundantly represented by numerous smaller vessels. The most various articles of consumption for European housekeeping, and manufactured articles of many kinds for natives and foreigners are imported by them, and exchanged for cargoes of the commodities of the country, such as tea, silk, rice, camphor, artistic productions, etc. The entire export and import trade amounts annually to some £6,500,000.

A low range of hills, covered in places with a light growth of pines, girdle in a semi-circular form the flat shore of the little bay, upon which the gigantic and usually snow-covered cone of Fuji-san looks down from the far west, and along which stretch the sister towns of Kana-gawa and Yokohama, one on the north, the other on the south side. The ends of the range fall steeply down to the sea. The southern promontory is called Hommoku-no-saki, or by foreigners "Treaty Point." Above, on the heights of the range which here terminates, called "the Bluff," are dozens of pretty one and two storeyed villas, belonging to the foreign merchants, whose business town extends eastward on the beach below, while the native quarter adjoins it in the background.

Yokohama possesses a Protestant and a Catholic church, in which service is performed in English and in French; it has clubs, horse races and regattas, and occasionally even concerts and theatrical performances. In its taverns the stranger is lodged and boarded for two or three dollars a day, frequently much better than in many first-class European hotels. The life of foreigners in the treaty ports is generally, in respect of material enjoyments, much more luxurious than most of them have been accustomed to at home; this is very largely due to the cheapness of game and poultry, especially of pheasants, fowls and ducks, as well as to a plentiful supply of the most delicious fish, oysters and other marine animals.

Since 1872 a railway, now worked entirely by a Japanese staff, and under Japanese superintendence, has been running from Yokohama, along the west side of the Tôkio-wan (Yedo Bay) northward to the capital, about 16 miles distant. The railway station is situated in the north-east of the town, on a site which has been reclaimed from the sea. The line of railway and a broad road on the left of it, run first to Kanagawa only a mile distant, after crossing a very broad dam, by means of which the western shallow part of the bay has been enclosed. Kanagawa, a long straggling town, through which the Tôkaidô runs, has 11,000 inhabitants. It was first opened to foreigners, who however soon removed to Yokohama, which is much better situated, and where too the new government buildings and the custom-house warehouses were

fune (bum-bum-ships), from the numerous salutes which are so often heard from them.

erected. The government nevertheless still bears the name of Kanagawa-ken, and indeed the English consul of Yokohama is still called by his staff the consul of Kanagawa.

The new quarter of Kanagawa, near the railway, supplies abundant occupation for the consular authorities and foreign physicians, for here lies the extensive Yoshiwara, where the sailors in particular often have their heads broken, or something worse.

The little town of *Kawasaki* with 3,200 inhabitants, lies on the right bank of the Tama-gawa, and about half way on the line between Yokohama and Shinagawa. The course which the line then follows between the bay and the Tôkaidô, from this south-western suburb along the houses of Tôkiô, is shown in the plan of this last-named place. To the north-west of Kawasaki, is the famous temple-grove of *Ikegami*, with the tomb of Nichiren. (See p. 456.)

As former Daimiô-seats in Musashi, we note *Kawagoye* (Matsudaira, 170,000 koku), *Oshi* (Matsudaira, 100,000 koku), *Iwatsuki* (Ôka, 23,000 koku), *Okabe* (Abe, 20,200 koku) and *Kanazawa* or *Mutsura* (Yonegura, 12,000 koku). Of these places, Kawagoye with 9,400 inhabitants, lies to the north-west of Tôkiô, and at about the same distance, but more to the north, is situated Iwatsuki with 5,000 inhabitants. According to the directions of Iyeyasu, the castles of these towns, as well as those of Sakura, Sekiyado and Koga in Shimôsa, of Takasaki and Usui in Kôdzuke, Utsunomiya in Shimotsuke and Odawara in Sagami, were to serve for the special protection of his capital. Oshi (Giôda) to the north of Iwatsuki, has 7,300 inhabitants, and Okabe, to the north-west of it, on the Nakasendô and near the border, 2,500 inhabitants, Kanazawa with 4,700 inhabitants, who live partly by the preparation of sea-salt, lies four ri south of Yokohama on the Bay of Yedo. The places of importance on the Nakasendô, which are passed on the way from Tôkiô, are in order of succession: *Urawa* with 1,800 inhabitants, seat of government of Saitama-ken, *Ômiya* with 3,400 inhabitants, *Kônosu* with 3,200 inhabitants, *Kumagaye* with 4,200 inhabitants, then *Fukaya* and *Okabe*. On the Kôshiu-kaidô to the west of Tôkiô, where the hilly country begins, is situated the town of *Hachiôji* with 8,000 inhabitants, whose main support is furnished by the numerous Fuji pilgrims, who make this a station on their way; still nearer to Tôkiô is the town of *Fuchin* with 4,600 inhabitants. On the Oshiu-kaidô there follow, after the suburbs of Senji, the larger places: *Sôka* (4,000 inhabitants), *Kasukabe* (3,500 inhabitants), *Satie* (4,300 inhabitants) and *Kurihashi* at the passage over the Tone.

2. *Shimôsa*. The Tone-gawa forms the western boundary towards Musashi; its tributary, the Kinu-gawa, and its easterly arm the eastern and western boundary towards Hitachi. Shimôsa is further bounded on the east by the sea, on the south by Kadsuza and the Bay of Yedo, and on its north-western extremity by Shimo-

tsuke and Kôdzuke. The province lies wholly in the plain of the Kuwantô and, with the exception of the places on the sea-coast, derives its support almost exclusively from agriculture. Among its towns the largest is *Chôshi*, a considerable fishing colony near Chôshiguchi at the eastern mouth of the Tone, with 25,000 inhabitants, while *Chiba* on the Bay of Yedo, with 3,100 inhabitants, is the chief town of the ken of the same name. The following places were formerly Jôkas or residences of Daimiôs: *Sakura* (Hotta, 11,000 koku), to the north-east of Chiba with 6,700 inhabitants, *Koga* (Doi, 80,000 koku) with 9,400 inhabitants, on the Watarase-gawa and Ôshiu-kaidô, 18 ri north of Tôkiô, *Sekiyado* (Kuze, 6,800 koku) north of Tôkiô in the fork of the Tone, with 4,900 inhabitants, *Yûki* (Midzuno, 18,000 koku) at the north end of Shimosa, with 5,700 inhabitants, *Tako* (Matsudaira, 12,000 koku) east of Sakura, with 3,000 inhabitants, *Takaoka* (Inouye, 10,000 koku) east of Nabekawa on the road leading on the south side of the eastern Tone to Chôshiguchi, *Omigawa* (Uchida, 10,000 koku), on the same road still further to the east, with 2,600 inhabitants, *Oimi* (Morikawa, 10,000 koku). More important than these are *Funabashi* with 9,500 inhabitants, in the northernmost end of the Bay of Yedo, *Midzukaidô* south-east of Sekiyado, with 3,500 inhabitants, and *Sawara* in the Kasumiga-ura between Takaoka and Omigawa, with 6,400 inhabitants.

3. *Hitachi*, the northernmost of the provinces of the Tôkaidô, borders in the south on Shimosa, in the west on Shimotsuke, in the north on Iwaki, in the east on the Pacific. It is also for the most part a flat country. It contains the famous Tsukuba-san, with a wide prospect over the Kuwantô in all directions. *Mito*, the chief town of the province, formerly the seat of a Gosanke (p. 320) and near relative of the Shôgun, with 350,000 koku, lies in a north-easterly direction from Tôkiô, not far the sea, and has at present only 20,000 inhabitants. Other towns which formerly had castles are: *Fuchiu* (Matsudaira, 20,000 koku), on the Mito kaidô (the road from Tôkiô to Mito), to the north of the Kasumi-ga-ura, with 3,000 inhabitants, *Shishido* (Matsudaira, 10,000 koku), and *Kasama* (Makino, 80,000 koku), both WSW. of Mito,¹ *Tsuchiura* (Tsuchiya, 95,000 koku) with 7,800 inhabitants (on the Mito kaidô, south of Tsukuba-san), *Shimodate* (Ishikawa), east of Yûki, with 5,000 inhabitants, *Yatabe* (Hosokawa, 16,300 koku), a large place on the way from Tôkiô to Tsukuba-san, north-west of Tsuchiura, *Ushiku* (Yamaguchi, 10,017 koku), *Asabu* (Shinjô, 10,000 koku), and *Shimotsuma* (Inouye, 10,000 koku), lying to the south of Shimodate on the Kinugawa. More important than the last-named places is Nakaminato, the port of Mito, with 8,300 inhabitants.

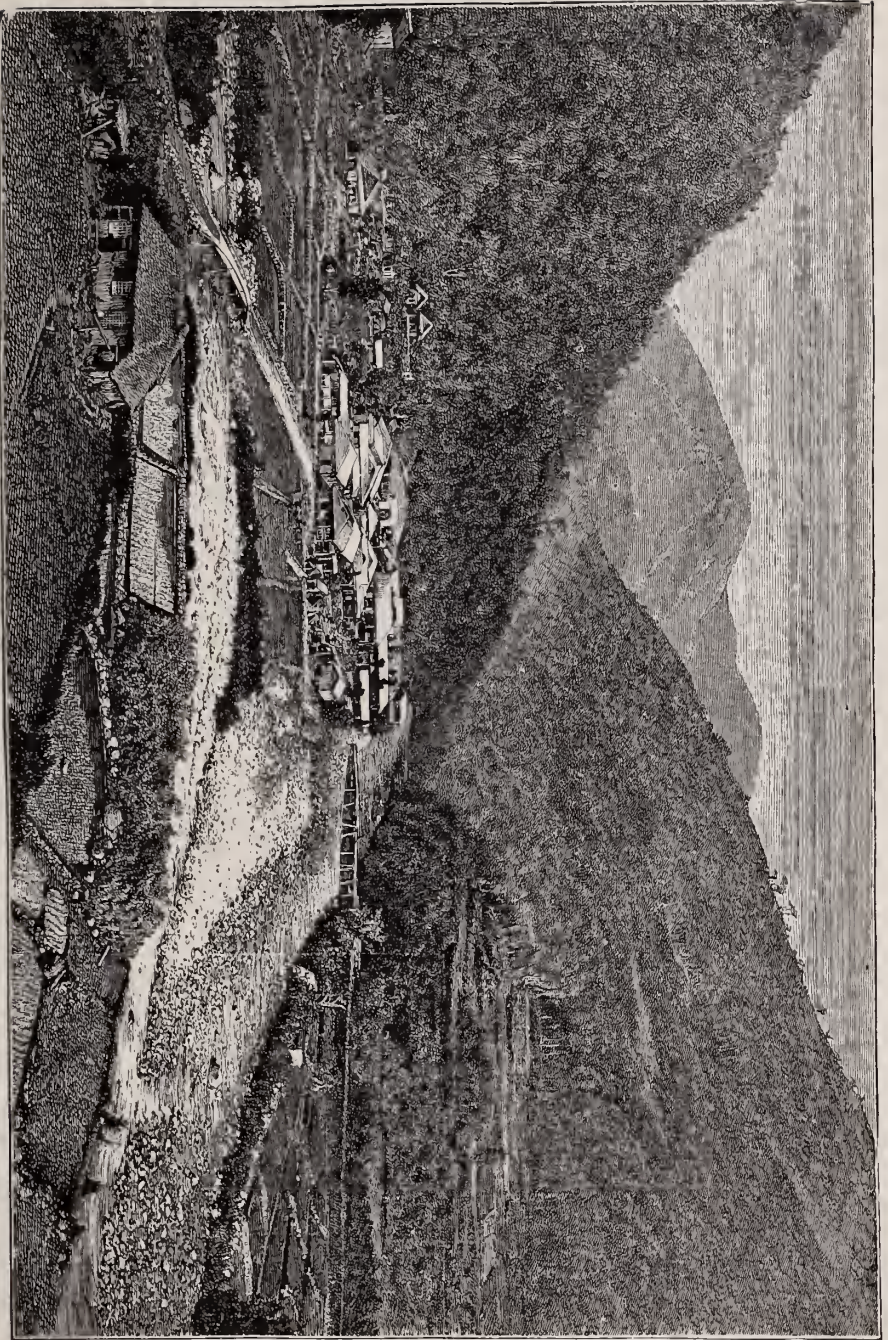
4. *Kadzusa*, embracing the northern portion of the peninsula in the

¹ The population of Kasama is given by the Japanese authorities as only 1,780, which seems scarcely credible.

east of the Bay of Yedo, and bounded by the Bay, the Pacific Ocean, Shimôsa and Awa, has *Kururi* with 4,000 inhabitants as its chief town. Here resided in former times the Daimiô Kuroda (30,000 koku). Other seats of Daimiôs were the little towns of *Ôdaki* (Matsudaira, 20,000 koku), *Iino* (Hoshina, 20,000 koku), *Sanuki* (Abe, 16,000 koku), *Tsurumai* (Midzuno, 15,000 koku), *Ichinomiya* (Kanô, 13,000 koku), and *Shôsai* (Hagashi, 1,000 koku), all with from two to four thousand inhabitants. Most of these are situated in the interior, Ichinomiya is on the east coast, while the little port of Kadzusa lies more to the south. If we follow the eastern shore of the Bay of Yedo, the road passes through *Yamada*, *Ancgasaki*, *Kisaradzu*, *Tomidzu*, *Minatomura*, and *Takegaoka*, of which *Kisaradzu* with 4,400 inhabitants is the most important. From the port of Tomidzu, by way of Sanuki, we reach the much-frequented *Kano-san*, whose temples and restaurants offer a celebrated prospect and a delightful coolness in summer.

5. *Awa* or Bôshiu, in the south of Kadzusa, forms the southern point of the peninsula to the east of the Bay of Yedo, with the well-known promontories of Su-saki (Cape King) and Noshima-saki. The little towns of *Katsuyama* (Sakai, 12,000 koku) with 2,000 inhabitants, and *Tateyama* (Inaba, 10,000 koku) with 2,600 inhabitants, are the chief places. Both are situated on the west coast.

6. *Sagami*, bounded on the east and north by Musashi, on the west by Kai and Suruga, on the south by Idzu and the sea, is one of the provinces best known to foreigners. Kamakura, E-noshima, the Hakone mountains, Yokosuka, and other notable and much visited spots are included within its limits, and may be reached in a short time from Yokohama. Following the Tôkaidô, we arrive at the little towns of *Fujisawa* with 5,600 inhabitants, and *Ôiso* with 4,900 inhabitants, and then at the chief town *Odawara*, extending along the flat shore of Sagami-ura, and at the foot of the Hakone mountains (Ôkubo, 153,000 koku), with 13,000 inhabitants, where the powerful Hôjô family formerly had their seat (p. 278). The Haya-gawa, which engirdles the Hakone mountains, here joins the sea. Following it upwards we find the beautifully situated watering-places Yumoto (*see* engraving), Tôno-sawa, Dôgashima, Miyanoshita, Sokokura and Kiga. The Tôkaidô crosses the stream by a bridge, and leads through Yumoto and Hata, steeply up to *Hakone* on the lake, and to the pass, and thence through the north of Idzu to Numadzu in Suruga. A second Daimiô-seat was *Haginoyamanaka* (Ôkubo, 13,000 koku), where a collateral branch of the family in Odawara lived. The town lies inland in the basin of the Baniu-gawa. The road to it runs through *Atsugi*, 2,000 inhabitants. On the peninsula of Sagami (Miura-gôri), and at its south-west corner, we find *Misaki* with 3,400 inhabitants, and on its east side *Uraga* with 2,400 inhabitants, where Perry's fleet was stationed, and nearer to Yoko-



YUNOTO, ON THE HAYAGAWA, AND THE HAKONE MOUNTAINS.

hama, in another deep and sheltered little bay, Yokosuka (pronounce Yokoska) the arsenal, established and admirably directed by Frenchmen,¹ and a dockyard.

Kamakura lies a few miles to the south-west of Yokohama, so that one may make a day's excursion from the latter place to see the sights of Kamakura, and be back again in the evening. The shorter road is through Kanazawa, keeping near the coast; another runs along the Tōkaidō to Fujisawa, and then to the south-east. From 1192 A.D. till about the middle of the 15th century, Kamakura was the seat of the rulers of Japan. In the days of its prosperity the town in which Yoritomo resided had upwards of 200,000 inhabitants. Streets full of life, with a happy and active population, once covered the ground on which the husbandman has for three centuries sown and reaped his harvest. The Minamoto, Hōjō and Ashikaga rulers, Nichiren and other Buddhist zealots, who once lived and worked here, have long passed away. The rapid development of the town was followed by many an assassination and bloody conflict for its possession, before it fell a prey to the flames. Large and ancient temples in small groves, and Salisburias here and there, and especially the celebrated Kamakura-no-Daibutsu (great Buddha of Kamakura) remind the visitor of the former importance and magnitude of Kamakura. The place is now a little town of 6,400 inhabitants. Its two most notable features are the Daibutsu and the temple Tsurugaoka, over whose steps once flowed Sanetomo's blood (p. 246), and whose priests show a whole collection of famous weapons, armour, and other memorials, which they refer to the time when the great lords here besought Hachiman's favour. The Daibutsu (*see* engraving, p. 460) consists, as does that of Nara, of copper bronze, but is without a saintly halo. The image rises on a platform covered with stone flags to a height of about 12 metres, with a circumference at the base of 30 metres. In the hollow interior is a small temple with numerous idols from the Buddhist Pantheon. The small, ball-shaped elevations on the head are supposed to represent snails, which, according to the legend, once crawled up Buddha, to shelter his bald head from the burning sun.

E-no-shima, the other noteworthy feature of this district, is a small coast-islet to the south-west of Kamakura, approached by a narrow sand dune, which is only covered with water at high tide. *E-no-shima* is formed of volcanic tufa, rises steeply to a height of about 60 metres above the sea, has two little villages near the coast, several temples, in particular one of the god Benten, and is covered in the interior with evergreen timber. Its inhabitants

¹ The name of the chief engineer engaged by the Bakufu was Verny. My friend, Dr. Louis Savatier, who took the utmost interest in my botanico-geographical studies, and with whom I was able to discuss many scientific questions, was physician to the little colony.

live by fishing, and by supplying the wants of the numerous pilgrims who visit the islet to gratify their wish to enjoy the beautiful aspect of the sea and of the distant Fuji, as well as to satisfy their religious needs. The naturalist finds at E-no-shima the well-known glass-sponge (*Hyalonema Sieboldi*), valuable conchylia, fish, and other products of the sea offered for sale.

B. The Tôtômi-nada Group.

7. The province of *Idzu*, embracing the peninsula of the same name between Sagami Bay and Suruga Bay, is about 32 miles long and scarcely half as broad. The Kanô-gawa, flowing north and emptying itself near Numadzu, is the most important river, and Amagi-san the highest elevation—1,425 metres. *Nirayama*, the famous old chief town, is said by our Japanese authority to have only 500 inhabitants. Larger towns are *Mishima*, on the Tôkaidô, with 3,800 inhabitants, and the port of *Shimoda*, known through the Perry Expedition, with 3,900 inhabitants. The volcanic peninsula is rich in warm springs and watering places, of which *Atami*, on the north-east coast, is the best known and most visited. It has a very mild climate, and like Hata and other places in the Hakone mountains, manufactures beautiful articles in wood.

To Idzu belong the volcanic Shichitô (Seven islands), and the Hachijô-shima group. The former consist of Ô-shima (Vries Island), To-shima, Nii-jima, Shikine-shime, Kandzu-shima, Miyake-shima, and Mikura-jima, the latter of Hachijô-shima, Ko-shima, and Awo-ga-shima. Ô-shima (Vries Island), the largest and northernmost of all, is 18 ri (38 miles) from Mi-saki on the Sagami peninsula, and has 4,000 inhabitants in six villages. It was to this island that Taira Kiyomori once banished the famous Japanese archer Minamoto Tametomo (p. 223). Hachijô-shima lying much further to the south also frequently served as a place of banishment. Thirty nautical miles further south and nearer still to the Munin-tô lies Awo-ga-shima in 32° 28' 8" N. lat. and 139° 48' 7" E. long., or about the latitude of Madeira. This lonely island 300 metres high is inhabited by about 200 people, who cultivate the soil and breed a few cattle.

8. The province of *Suruga* or *Sunshiu*. It extends along the gulf of the same name, which abounds in fish, and is also bounded by Idzu, Sagami, Kai and Tôtômi, from which it is separated by the Ôi-gawa. On its northern border towards Kai rises Fuji-no-yama, which majestically overlooks the entire province. On its southern declivities tea is cultivated to a great extent. The chief town is called *Shidzuôka*, and lies on the Tôkaidô. Here dwelt Iyeyasu before he founded Yedo, and hither he again retired. The town was at that time called *Sumpu*, and the name *Fuchiu* is

sometimes still used for it.¹ Shidzuôka means Hill of peace. As the founder of the Tokugawa dynasty sought and found peace here, so also did his descendant, Keiki or Hitotsubashi Yoshinobu, the last Shôgun (p. 359), who since 1870 has lived here in retirement. In former times Shidzuôka was a flourishing town, where many Hatamoto lived. It now produces the impression of departed greatness. It has 35,000 inhabitants, who support themselves in part by the manufacture of lacquered articles and rattan-work. *Numadzu* (Midzuno, 50,000 koku), 11,000 inhabitants, on the Suruga-wan, and *Shimidzu*, to the east of Shidzuôka, with 4,100 inhabitants, are seaport towns, the latter in particular carrying on the traffic of Kai. *Tanaka* (Honda, 40,000 koku), near the Tôkaidô and south-west of Shidzuôka, with 4,050 inhabitants, and *Ojima* (Matsudaira, 10,000 koku) to the north-east and further inland than the capital, may be mentioned as having been Daimiô-seats.

9. *Kai* or *Kôshû*; a small territory, bounded by high and famous mountains and the provinces of Suruga, Sagami, Musashi and Shinano, and watered by the Fuji-kawa and its tributaries, devoted to agriculture and silk growing on a considerable scale. It produces the beautiful rock-crystals, the best ink-shells and grapes (*Kôshiô-no-budô*) in the Tôkiô market. Its chief town *Kôfu* has 16,000 inhabitants, a large Filature in the French style, and a training college for teachers. The little town of *Ichikawa*, 4,000 inhabitants, 4 ri to the south-west, is well known for its paper manufacture. Lower down, but also on the Fuji-kawa, lies *Kajikasawa* with 3,500 inhabitants.

10. *Tôtômi*, or *Enshû* is bounded on the east by Shinano, on the west by Mikawa, on the south by the sea. Its chief town lies on the Tôkaidô, and is called Hamamatsu (*i.e.* Hamamatsu). It has 11,000 inhabitants, and was formerly the residence of Inouye, a Daimiô of 60,000 koku. Other towns with castles were *Kakegawa* (Ôta, 50,000 koku) with 4,000 inhabitants, on the Tôkaidô, *Yokosuka* (Nishio, 35,000 koku) with 5,500 inhabitants, and *Sagara* (Tanuma, 10,000 koku) with 1,400 inhabitants, to the south of this road. On the Tôkaidô moreover are the little towns of *Arai* with 6,500 inhabitants, the ferry from Mikawa across the shallow Hamana-minato, and *Mitsuke* with 4,500 inhabitants.

11. *Sanshû* or *Mikawa*, bounded on the west by Tôtômi, on the south by Shinano and Mino, on the east by Ôwari, on the north by the sea. On the Tôkaidô lie the former castled towns *Okazaki* (Honda, 50,000 koku) with 13,000 inhabitants, and *Yoshida* (Oguchi 70,000 koku) with 5,600 inhabitants; to the south of the road are *Nishio* (Matsudaira, 60,000 koku) with 7,100, *Kariya* (Doi, 23,000

¹ Sumpu comes from sun (Sunshû), the Chinese equivalent for Suruga, and pu=fu, "chief town." The latter word occurs again in the name Fuchû, *i.e.* middle, inner (chû) chief town, which has been applied to a great number of other provincial capitals.

koku) with 1,500 inhabitants, *Tawara* (Miyake, 12,000 koku) 2,600 inhabitants; north of the Tōkaidō, *Okudono* (Matsudaira, 16,000 koku), *Ōhira* (Ōka, 10,000 koku), *Koromo* (Naitō, 20,000 koku) with 3,400 inhabitants. *Nishio*, 7,100 inhabitants, and *Toyohashi*, 7,500 inhabitants, are larger towns.

12. *Bishiu* or *Owari* succeeds Mikawa on the west, borders to the north on Mino, to the west on Ise, to the south on the sea, consists partly of fertile alluvial soil, partly of very barren, pebbly hilly ground, and is thickly populated. With its 130,000 inhabitants, its chief town *Nagoya* ranks as the fourth largest town in the country, and as the seat of several important branches of industry. The chief among them are embroidery on woollen and silk stuffs, enamelling of copper and porcelain, etc. The town in which formerly resided a Sanke with 610,500 koku, who also possessed large forests in Shinano, lies on the right bank of the Shōnai-gawa, an unimportant stream, and is the chief town of Aichi-ken. It has not particularly attractive environs, but an intelligent, energetic population; *Miya* or *Atsuta*, on the gulf and the Tōkaidō, with 15,200 inhabitants, may be regarded as a suburb. In the north lies *Inuyama* on the Kiso-gawa, where Naruse, an important Baishin, resided. Other places of importance are: *Ichinomiya* with 7,400 inhabitants, north-west of Nagoya, *Inagi* with 6,200 inhabitants, *Tsushima* 7,400 inhabitants, and *Narumi* on the Tōkaidō, *Seto*, north-east of Nagoya, the centre of an extensive pottery district, which sends to the market amongst other things large quantities of blue decorated porcelain (*seto mono*).

13. The province of *Ise* or *Seishiu* forms a long strip of land running from north to south in the west of Ise-no-umi and Kiso-gawa. Its northern boundary is Mino, the western Ōmi, Iga and Yamato, its southern the sea and a portion of Kii. The most fertile level portions of the province are near the coast; in the hill country a great deal of tea is grown, and on the Tōkaidō, especially at Yokkaichi, pottery is baked. Among the towns we may just mention those which were formerly Daimiō-residences, viz. *Tsu* (Tōdō, 323,900 koku) with 25,000 inhabitants, *Hisai* (Tōdō, 53,000 koku) with 3,800 inhabitants, *Kameyama* (Ishikawa, 60,000 koku), 5,300 inhabitants, *Kuwana* (Matsudaira, 110,000 koku) with 18,000 inhabitants, *Nagashima* (Masuyama, 20,000 koku), *Kambe* (Honda, 15,000) with 2,700 inhabitants, and *Komono* (Hijikata, 11,000 koku). *Yokkaichi* on the Tōkaidō has 9,700 inhabitants; *Matsuzaka*, 8,800 inhabitants, and *Yamada*, 23,000 inhabitants. At the latter place are the celebrated Shintō-temples, dedicated to the sun- and earth-goddess.

14. *Shima* forms the easternmost projection of Ise, with rocky, broken coasts, and deep harbours. It is the smallest of all the provinces, and possesses the excellent harbour of Toba (Inagaki, 30,000 koku), which numbers 4,800 inhabitants.

15. The province of *Iga*, a small territory between Ise, Ōmi,

Yamashiro and Yamato, is the district in which the Kidzugawa rises, and also the home of the giant salamander. Its chief town *Uyeno* has 12,500 inhabitants; the Daimiô-family of the Tôdô formerly lived here. The little town of *Nabari* has 3,000 inhabitants.

III. THE TÔSANDÔ, THE EAST MOUNTAIN ROAD, OR THE EASTERN MOUNTAIN WAY.

This extensive group of provinces begins in the south, at the borders of Yamashiro, in lat. 35°, and ends in the north, at the Straits of Tsugaru. Till about as far as the 37th parallel it is bounded and separated from the sea on the east by the provinces of the Tôkaidô, on the west by those of Hokurokudô, and then stretches northward first to the east and then to the west coast, and under the names of Ôshiu and Dewa embraces the entire north of Hondo. Its climate and products corresponding to the great varieties of situation and degrees of elevation, are very dissimilar, but in addition to ordinary agriculture, the chief source of profit, especially in the middle provinces, is undoubtedly the rearing of silk-worms. In the two southernmost provinces of Ômi and Mino tea is also cultivated, and in several of the northern provinces lac is collected and mining carried on. The fisheries moreover along the coasts of Ôshiu and Dewa furnish occupation and support for many. Several branches of industry flourish here and there and will be mentioned in the appropriate places. The entire district falls naturally into three groups, viz. 1. the provinces of the Nakasendô : Ômi, Mino, Shinano and Kôdzuke, with which we include Hida and Shimotsuke ; 2. Ôshiu : 3. Dewa.

A. *Provinces of the Nakasendô.*

These provinces, with 3,420,000 inhabitants, extend from the 35th parallel in the south, northward to the 37th degree of latitude ; to the east they are bounded by the provinces of the Tôkaidô, to the west by those of the Hokurokudô, and belong principally to the basins of the Yôdô, Kiso, Shinano and Tone. Their chief channel of traffic however is the Nakasendô, *i.e.* "the road between the mountains," which as the second most important connecting link runs through the interior of the country from Kiôto to Tôkiô and has a total length of 138 ri or 280 miles. In following it we now pass over considerable rivers, and traverse fertile plains and blooming fields, now pass roaring mountain streams, go through cool forest shades, across high mountain ridges and saddles, and may, now in narrow compass now in wide prospect, enjoy the loveliest landscape that the interior of Japan can offer.¹

¹ A further description of this highway, constructed more than 1,100 years ago, may be found in my paper in the 59th supplementary number of *Petermann's Mittheilungen*, entitled "Der Nakasendô in Japan."

1. The province of *Ômi* or *Gôshiu* surrounds the Lake of Biwa and borders on Yôamashiro, Wakasa, Echium, Mino, Ise and Iga. *Ôtsu* or *Shiga*, as it is now named after the Shiga-gôri (district of Shiga), the chief town of the Shiga-ken, beautifully situated near the outflow of the Lake of Biwa, is in the number of its inhabitants only the second, but in other respects by far the most important, town in the province. It is about equidistant from Ôzaka on the Inland Sea, Tsuruga on the Pacific, and Owari (the town of Nagoya), with which it will be connected before long by railways, of which that to Kiôto and Ôzaka has recently been opened. As far as can be judged, its importance will then become still greater. Till lately the old and active traffic with Kiôto, 3 ri away, was carried on by means of rattling wagons. The environs of Ôtsu, present many attractions in addition to the lake, particularly the temples of the Tendai sect, Miidera and Hiyei-zan, a famous old pine-tree with horizontal boughs, which is known as the Pine of *Karasaki*. Immediately after Ôtsu comes *Zeze* (Honda, 60,000 koku), with 6,400 inhabitants, then the passage across the Uji-gawa, or outlet of the Lake of Biwa, by means of a famous old wooden bridge, the Seta-no-karahashi, to the town of *Seta*, and then to *Kusatsu*, where the Tôkaidô and Nakasendô separate, to meet again at the Nihon-bashi in Tôkiô, where they terminate. Round the Lake of Biwa are situated the following noteworthy places: *Hikone* (Ii, 350,000 koku) on the eastern bank. This town was formerly called *Saôyama*, and was the residence of Mitsunari (p. 296); it has still 24,400 inhabitants. To the north of it lies *Nagahama* with 5,400 inhabitants, celebrated for its silk manufacture, and a little further from the lake the small town of *Miyagawa* (Hotta, 13,000 koku). At the north end of the lake are the little ports of *Shiotsu*, *Ura* or *Hanoura* and *Kâidzu*. The distance by road from Hanoura to Tsuruga on the Sea of Japan is only 6 ri (12 miles). On the west side of the lake lies *Ômizo* (Wakebe, 20,000 koku) with 2,000 inhabitants. Following the Nakasendô from Kusatsu, we come to *Takamiya*, well known for its cotton fabrics, while on the Tôkaidô we reach the small town of *Minakuchi* (Katô, 25,000 koku), which lies in a tea district and has a population of 5,000. To the north of it lie *Ninnôjin* (Ichihashi, 18,000 koku), and still further away *Yamanouchi* (Inagaki, 13,000 koku), while to the north-west is *Mikami* (Endô, 12,000 koku).

2. The province of *Mino* borders on Ômi, Ise, Owari, Mikawa, Shinano, Hida and Echizen, is plentifully watered, and in the plain of the Kiso-gawa very fertile. The inhabitants of the mountain valleys in the north support themselves by rearing silk-worms; in some cases, also, by the manufacture of paper, as in Makidani, where the celebrated Mino-gami (Mino paper), which is the favourite paper for windows, is made. Pottery is manufactured in several villages in the south-eastern portion on the borders of Owari and Mikawa. The chief town *Gifu* is 9 ri distant from Nagoya, 25 from

Kiôto, and has 11,000 inhabitants. It is also called *Imaidzumi*, and is situated on the left bank of the Gujô-gawa. About an hour's journey to the south of it, on the Nakasendô, is the town of *Kanô* (Nagai, 32,000 koku) with 5,100 inhabitants, noteworthy for its crape manufactures. Higher up in the valley of the Gujô-gawa lie *Kôdzuchi-mura*, a place of 3,000 inhabitants, where tea is grown on a considerable scale, and still further to the north, *Hachiman* (Awoyama, 48,000 koku), with 5,400 inhabitants and extensive silk-worm farms. The Daimiô's residence was on the top of a wooded mountain. The fortified-town Ôgaki (Toda, 100,000 koku), to the south of the Nakasendô and east of Sekigahara (p. 298), has a population of 10,200. Other seats of Daimiôs were *Takasu* (Matsudaira, 30,000 koku), 35,000 inhabitants, south of Ogaki; *Iwamura* (Matsudaira, 30,000 koku), 2,000 inhabitants; *Naycki* (Tôyama, 10,000 koku), on the Kiso-gawa, with 2,300 inhabitants; *Takatomi* (Honjô, 10,000 koku), *Imao* and *Iwate*.

3. *Hida* is the most remote and least known province of all Japan, it is separated from the sea and all the main lines of communication, and girt by high mountains, especially in the east, so that on entering it, from any side, considerable passes have to be crossed, as the roads into the interior can only in a few places follow the rivers which break through the enclosing mountains in narrow ravines. Of these rivers the Masuda-gawa (*Hida-gawa*) runs into the Kiso in Mino, the Miya-gawa and Takara-gawa, two other rivers of the country, unite near the borders of Etchû to form the Jindzu-gawa, which empties itself into the Sea of Japan, into which also the Shira-kawa, coming from Hakusan, pours its waters. Mino, Shinano, Etchû and Kaga enclose the province, which thus forms in many respects a district apart, with a population of only a little over 100,000 on about 1,700 square miles. Hardly 3 per cent. of the land is under cultivation. The chief sources of livelihood are breeding silk-worms and procuring timber for building. This province was, before 1868, a domain of the Shôgun, and is the only province of the country without any Samurai. The chief town, *Takayama*, on the Miyagawa, has 13,000 inhabitants; *Furukawa*, lower down, has 3,000 inhabitants, and *Funatsu*, on the Takara-gawa, 1,500 inhabitants, with a Filature.

4. *Shinano* or *Shinshû*, one of the largest provinces of Japan, extends lengthways on both sides of the 138th meridian, and borders on the west on Etchû, Hida and Mino, on the east on Kôdzuke, Musashi and Kai, on the north on Echigo, in the south on Mikawa and Tôtômi and Suruga. It is a high land of from 600 to 800 metres mean elevation, girt by high mountains, and traversed by the Nakasendô for a distance of 125 miles from south-west to north-east. Four of the chief rivers of the country, the Chikuma-gawa and its tributary the Sai-gawa, the Kiso-gawa and the Tenriu-gawa, have their sources within it, and traverse it in beautiful valleys, along which run the more important roads of

communication. Splendid forests, especially along the Kiso and Sai-gawa, as well as silk-worm breeding, which is very widely spread, furnish in the main the means of existence to the population of 960,000. Noteworthy places are:

(a) In the basin of the Chikuma-gawa and Sai-gawa: *Nagano*, a prosperous town, beautifully situated on a height in lat. $36^{\circ} 40'$ N. and $1^{\circ} 36'$ W. (Tôkiô), with an extensive prospect towards the east. The Hokkoku-kaidô (Northland road), which branches off from the Nakasendô at Oiwake, and follows the Chikuma-gawa, crosses the Sai-gawa above its mouth and then rises past Nagano to Lake Nojin, shortly afterwards sinking again to Takata in Echigo. Nagano has 7,000 inhabitants, is the chief town of the ken of the same name, and is also called Zenkôji, from a famous and much-visited temple and monastery at the north end of the town. *Iiyama* (Honda, 20,000 koku) with 5,700 inhabitants, is the most northerly town of importance in the province, then comes *Susaka* (Hori, 10,050 koku) with 2,500 inhabitants, near the borders of Kôdzuke; and higher up on the Tenriu: *Matsushiro* (Sanada, 100,000 koku) with 8,000 inhabitants, *Uyeda* (Matsudaira, 53,000 koku) with 6,300 inhabitants. It is a cheerful little town, lying, like the three previous towns and that next named, on the right bank and at some distance from the river, and has a flourishing silk trade. *Komoro* (Makino, 15,000 koku) with 6,200 inhabitants, and *Oiwake* (i.e. fork, because here the Hokkurokudô branches off from the Nakasendô) with 2,000 inhabitants, lie on the southern declivity of Asama-yama. *Iwamurata* (Naitô, 15,000 koku) with 2,700 inhabitants, on the Nakasendô. *Matsumoto* (Matsudaira, 60,000 koku) to the right of the Sai-gawa, with 14,300 inhabitants, and *Ikeda* in the outspurs of the Hida and Shinano snow range on the Takaze-gawa, a left tributary of the Sai-gawa, with 3,000 inhabitants, is the chief seat of the Yamamai silk manufacture.

(b) In the basin of the Kiso-gawa: *Fukushima* on the Nakasendô and Kiso, midway between Tôkiô and Kiôto, with 2,800 inhabitants.

(c) In the district of the Tenriu-gawa: *Iida* (Hori, 17,000 koku) with 9,000 inhabitants; *Taôatô* (Naitô, 33,000 koku) with 2,400 inhabitants; *Takashima* (Suwa, 30,000 koku) on the Suwa lake and the highway to Kôfu, with 5,200 inhabitants, and *Shimo-no-suwa*, on the Suwa lake and Nakasendô, with a celebrated Shintô shrine and hot springs, 3,500 inhabitants.

5. *Kôdzuke*¹ or *Jôshiu*. To the north-west of Musashi and of about the same size, lies Jôshiu and Iwashiro between the 36th

¹ Kôdzuke and Shimotsuke formed in early times the district of Kenu (Kenu-no-kuni) or Ke; later they were divided into the upper (Kami or Kôdzu) and the lower (Shimo) Ke. The same thing happened with the district of Fusa (fusa-no-kuni), which was later divided into Kami-fusa and Shimo-fusa, from which have arisen the names Kadzusa and Shimôsa.

and 37th parallels, and is bounded by Musashi on the south, Shinano on the west, Echigo on the north, and Shimotsuke on the east. Between the latter and Musashi, Ôra-gôri projects itself as a narrow strip extending eastward as far as the province of Shimosa. Towards Musashi the Kanna-gawa, and below its mouth the Tone-gawa, towards Shimôsa and the south of Shimotsuke, the Watarase form the boundary, while lofty mountains divide it from the other neighbouring provinces.

Kôdzuke belongs like Shimotsuke to the Kuwantô, is level and very fertile in its eastern portion, and rises in the west and north through a hilly country up to the border mountains. Its chief industrial resource is silk-worm rearing, which has produced a comparatively high degree of prosperity, especially in the low hill-country and its towns. *Takasaki* (Matsudaira, 82,000 koku), the chief town of the province, lies entirely in the plain, in the fork between the Karasu and Usui on the Nakasendô. Here branches off the Niigata-kaidô (way to Niigata), which crosses by the Miku-ni-tôge. The population was repeatedly given to me as from 20,000 to 25,000, though in Nippon Chi-shi Tei-yô it is set down as only 11,285. To the north of Takasaki, on an island in the Tone, lies the town of *Mayebashi* with 15,000 inhabitants, whose silk enjoys the highest reputation. Still higher up on the Tone we find *Numata* (Toki, 35,000 koku) with 4,000 inhabitants. In the flat country of Ôra-gôri lies *Tatebayashi* (Akimoto, 60,000 koku) with 9,000 inhabitants. In the basin of the Usui-gawa the following deserve notice: *Annaka*, on the Nakasendô (Itakura, 30,000 koku), with 3,200 inhabitants, and *Sakamoto*, at the foot of the Usui-tôge and on the Nakasendô. To the south of this road lie *Obata* (Matsudaira, 20,000 koku) with 3,000 inhabitants, *Nanokaichi* (Mayeda, 10,000 koku), and *Tomiôka*, well known for its large Filature laid out in the French style (population, 1,500). The little town *Isezaki*, formerly a Daimiô residence (Sakai, 20,000 koku), in the east of Takasaki, has 3,400 inhabitants, and *Nitta*, to the south-east of Takasaki, 1,800 inhabitants (*see* Nitta Yoshisada, p. 253). The famous watering-place Kusatsu lies in the district of the Wagatsu-gawa and Adzuma-gôri, which embraces the north-eastern portion of the district.

Shimotsuke or *Yashiu*. This province lies to the east of the last named, to the west of Hitachi, the south of Ôshiu, and is separated on the south from Musashi by a narrow strip of Kôdzuke and Shimôsa. It is watered by tributaries of the Tone, particularly the Kinu-gawa, as well as the Naka-gawa, which discharges itself in Hitachi. The land falls with them in a south-easterly direction to the plain of the Kuwantô. The Nakasendô lies some distance away on the south; the Ôshiu-kaidô runs through it. On this high road we find the following towns: *Utsunomiya* (Toda, 77,000 koku) with 19,000 inhabitants, 65 miles north of Tôkiô, *Kitsuregawa* and Ôtawara (Ôtawara, 11,400 koku), 2,300 inhabit-

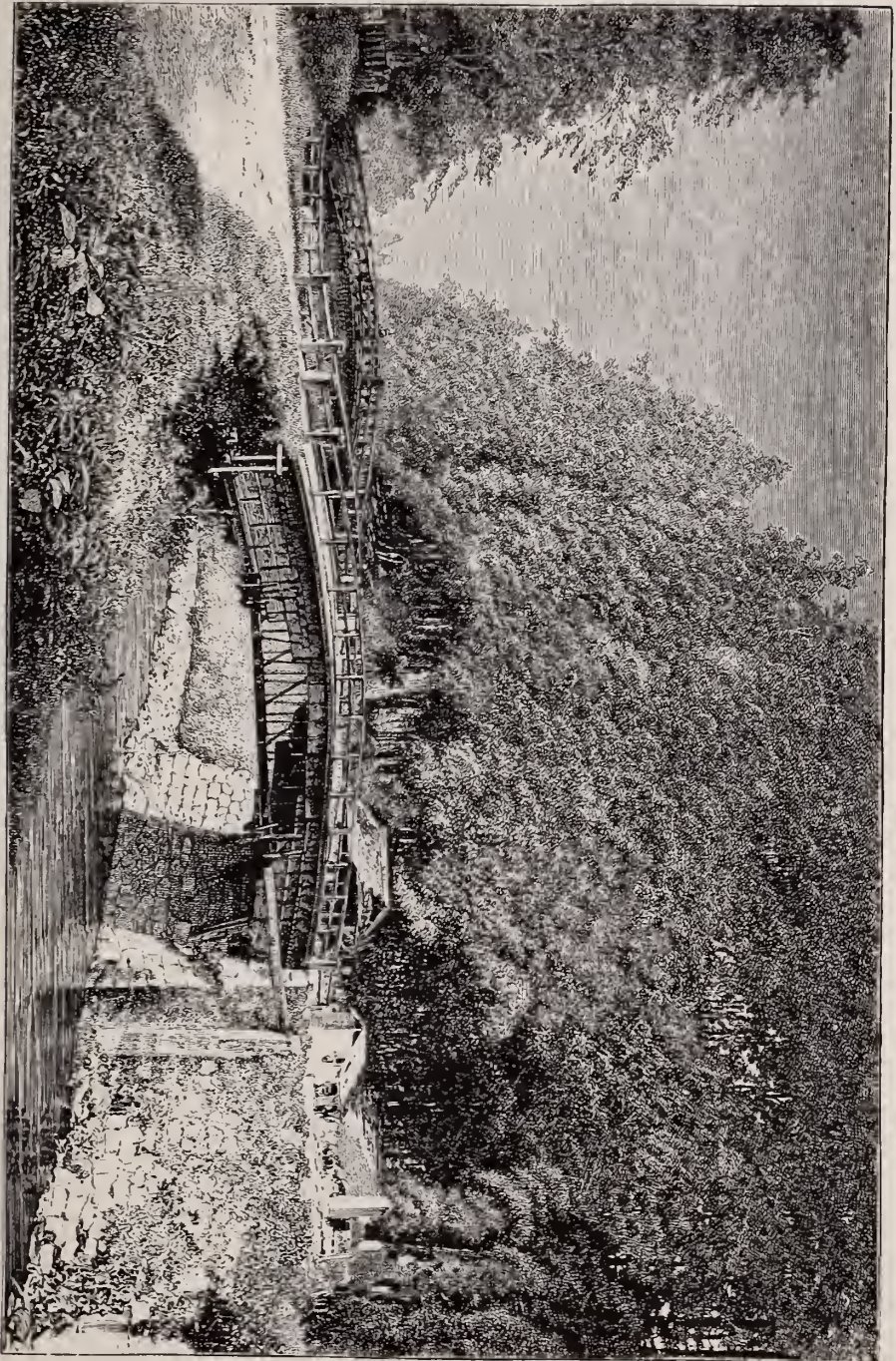
ants. To the east of the Ôshiu-kaidô lie: *Karasuyama* on the Naka (Ôkubo, 30,000 koku) with 2,500 inhabitants, *Kurohane* (Ôzeki, 18,000 koku), 2,300 inhabitants; to the west of it: *Mibu* (*Torii*, 30,000 koku), 4,000 inhabitants; *Ashikaga* (Toda, 11,000 koku), 2,000 inhabitants, ancestral home of the Shôgun-dynasty of that name. *Tochigi*, the chief town of the ken to the west of Mibu, 4,000 inhabitants. This town lies on the Reiheishi-kaidô, *i.e.* the road which, under the Tokugawa, the Reiheishi (or envoy of the Mikado to Nikkô) took from Hônjô, where he left the Nakasendô, to Nikkô. *Sano* or *Temmei* (Hotta, 16,000 koku), 5,000 inhabitants, likewise on the Reiheishi-kaidô after it crosses the Watarashigawa and nearer to Nikkô; *Kanuma*, 15,061 inhabitants (?). *Nikkô* or Hachiishi, 3,000 inhabitants.

Nikkô, *i.e.* the sun's splendour (see also pp. 67, 68 and 232) lies 36 ri or 19 geographical miles NNW. of Tôkiô. The usual road thither follows the Ôshiu-kaidô to Utsunomiya and then branches off on the left to the NW. The splendid conifers, and particularly the cryptomerias which border it, from the Tone-gawa, onwards and especially in its last portion, form an incomparable and magnificent avenue, of which the photograph at p. 151, representing the approach to Imaichi, gives a faithful picture. *Imaichi* is a cheerful little town 2 ri from Hachiishi, from which a road branches off on the right crossing the Daiya-gawa to the Kinugawa, and then turning up along its left bank northward to Sannôtôge and continuing to Aidzu-taira. Hachiishi or Nikkô (although the latter name is applied rather to the neighbouring grove and its sights) forms a single broad street, which mounts straight up to the banks of the Daiya-gawa. The engraving opposite depicts the passage over the bed of the mountain stream which is narrowed in at this point, and the entrance into the celebrated grove at the foot of Nikkôsan. Cryptomerias, of which examples of 5 to 6 metres in circumference are shown in the illustrations at pp. 151 and 303, and retinispores, form the shade beneath which Iyeyasu and Iyemitsu rest, and costly temples, pagodas, lanterns of bronze and stone, are erected in their honour.¹

B. Mutsu or Ôshiu.

Ôshiu or Mutsu, the north-eastern district of Hondo, commences where the traveller leaving the Kuwanto can, from the heights on the northern boundary of Hitachi and Shimotsuke, take his last look at Fuji-san, and it stretches along the coast of the Pacific to the Tsugaru Straits. On the west the mountain range which forms the backbone of the island constitutes the boundary to-

¹ Further information about Nikkô will be found in Satow and Hawes' "Guide Book to Nikkô:" Yokohama, 1875; and my article in the 6th and 7th parts of the *Mittheilungen d. deutschen Gesellschaft Ostasiens*.



BRIDGE OVER THE DAYGAWA AT NIKKŌ.

wards Dewa, and further south another high mountain range the boundary projecting westward towards Echigo. The chief means of communication is the Ôshiu-kaidô already mentioned, which begins at the Nihon-bashi in Tôkiô and runs northward through the suburb of Seki, and the towns in the Kuwantô of Koga, Utsunomiya and Ôtawara to Shirakawa on the Abukuma, and then along the river past Fukushima to Sendai. Subsequently it follows the valley of the Kitakami, and finally ends at Awomori on the Tsugaru-no-seto. The whole north of Honshiu was formerly called Michi-noku, at least so far as to the 38th parallel. In the age of Wadô (708-715) it was divided into Mutsu and Dewa. The several districts of Mutsu were usually named after their principal town or possession, as Aidzu, Sendai, Nambu, Tsugaru.

In the first year of Meiji a division was made of the district of Ôshiu into the five provinces of Iwashiro, Iwaki, Rikuzen, Rikuchiu and Mutsu, the first of which only is in the interior. These five provinces now form the following ken : Fukushima (Iwashiro and Iwaki), Miyagi (Sendai), Iwate (Nambu) and Awomori (Mutsu). Their products will be mentioned in speaking of the particular provinces. The population of Ôshiu amounts to 2,311,000. Sendai, the largest town, has upwards of 50,000 inhabitants ; then follow Hirosaki and Morioka, having each over 30,000 inhabitants, and Wakamatsu with more than 20,000 inhabitants.

1. *Iwashiro*. This province is bounded by Iwaki, Uzen, Echigo, Kôdzuke (for a short distance) and Shimotsuke. The central mountain range divides it between Adzuma-yama and Yamizô-yama into the river-basins of the Agano-gawa and the Abukuma-gawa, the products of which are essentially different. The first embraces the former territory of Aidzu, consisting of the beautiful and fertile basin of about 12 square ri, the Aidzu-taira, and an encircling ring of high mountains and beautiful valleys. The chief town, *Wakamatsu*, situated near the eastern margin of the Aidzu-taira, $2\frac{1}{2}$ ri to the west of the Lake of Inawashiro, has 21,500 inhabitants. Prince Matsudaira or Hoshina resided upon a hill near the town. The castle was razed in the autumn of 1868, and the town itself suffered greatly during the siege, the chief part of it perishing by fire. Its most notable source of income is the lacquer manufacture, which serves not only home requirements but also the export trade from Yokohama. The products of the lacquer-tree in various mountain-valleys, vegetable wax and lacquer, are well known throughout the country as Aidzu-ro and Aidzu-urushi. To the east of Wakamatsu is the watering place *Higashiyama*, where indifferent springs of a temperature of from 50° to 55° C. burst from volcanic fissures. The coolness of this charming little valley, which is only an hour's journey from the capital, and its warm springs, attract many thither during the summer. A ri and a half south-west of Wakamatsu lies the town of *Hongo* with considerable porcelain works. The

other places requiring mention are: *Naganuma*, on the Ôshiu-kaidô, with 2,000 inhabitants, on the road from Wakamatsu to Shirakawa; *Koarai*, population 2,000; *Bange*, population 3,000; and *Tashima*, population 1,200; and *Nozawa*, population 4,000, in the Taira.

The eastern portion of Iwashiro, or the basin of the Abukuma, is particularly noteworthy for silk-worm rearing upon an extensive scale. The Ôshiu silk from the districts of Sukagawa, Kôriyama, Nihommatsu, and Fukushima is celebrated, and has been a source of great prosperity to these and other places. On the Ôshiu-kaidô itself are situated in the following order: *Yabuki*, which during the civil wars was almost entirely destroyed by fire, 3,000 inhabitants; *Sukagawa*, 5,000 inhabitants, a wealthy, handsome town in a beautiful hilly country; *Kôriyama*, 5,000 inhabitants; *Motomiya*, 3,500 inhabitants; *Nihommatsu* (Niwa, 100,700 koku), 11,000 inhabitants; *Fukushima* (Itakura, 30,000 koku), 71 ri from Tôkiô, 6,000 inhabitants. East of the Abukuma lie *Yanagawa*, 3,100 inhabitants, with an important silk trade; *Kawamata*, 3,200 inhabitants, and *Shimodeto* (Tachibana, 10,000 koku).

2. *Iwaki*. This province extends along the sea between Hitachi, Rikuzen, and Iwashiro, and only in the north and south reaches westward as far as the Ôshiu-kaidô and beyond it. Its chief sources of income are silk-worm rearing and agriculture in the interior, and fisheries along the coasts. In its southern portion is situated on the great highway and the Abukuma, the fortified town of *Shirakawa* (Abe, 100,000 koku) with 7,400 inhabitants. It played a leading part in the civil war. The main road to Aizu commences here. In the northern portion of the province, on the Ôshiu-kaidô, lies the Jôka *Shiroishi*, with 3,000 inhabitants and a silk manufacture. The chief artery of communication in the province, which follows also its most fertile portion, is the coast road (Hama-kaidô). On it are situated the chief town *Taira*, or *Iwakitaira* (Andô, 50,000 koku) with 4,300 inhabitants, in a beautiful fertile plain; *Nakamura* (Sôma, 60,000 koku) with 2,000 inhabitants, and *Watari*. In the interior we find *Tanagura* (Matsudaira, 60,000 koku), 2,300 inhabitants; *Miharu* (Akita, 50,000 koku), 5,100 inhabitants; *Kakuda*, 1,600 inhabitants.

3. *Rikuzen* (or *Sendai*) succeeds Iwaki on the north, and borders eastward on the sea, westward on Uzen, and northward on Rikuchiu (Nambu). The province in its flat middle and eastern parts forms one of the principal rice districts, and was ruled by Date, a Daimiô of 325,600 koku. His residence was situated in the western portion of the chief town Sendai, on the right bank of the Shoshi-gawa, a considerable stream. *Sendai* is the most important town in all Ôshiu, it has 52,000 inhabitants, and a prosperous and clean appearance. The two main streets cross each other at right angles in the direction of the compass, and have four corner-houses built in the same way, the gables of which are decor-

ated with dragons. Four ri to the east, on the Bay of Sendai, lies *Shiwogama*, with 3,200 inhabitants. It is a straggling place with many large inns, which were in former times very flourishing, as the Samurai of Sendai came here to take their pleasure. The little town is situated in the bay, in which lie Matsushima, the fir islands celebrated for their beauty. Among the attractions, moreover, is included a famous temple in the upper part of the place, as well as the four ancient iron salt-pans, from which the place derives its name (Shiwo=salt, and kama=an iron pan). A famous deity once used to make salt here in seven such pans, which he had procured from the castle of Riugu (p. 407). Thieves came by night, stole three of them, and endeavoured to carry them off in a boat. The barking of dogs gave warning to the god. He said that as the pans came from Riugu, they should return thither again, raised a storm, and caused the robbers and boat, with the three pans, to sink in the sea. Those which still exist are certainly very old. They are about a metre in diameter, are shallow, and have sides an inch thick and much rusted. They rest upon stone pedestals and are no longer used. Between Sendai and Shiwogama lies the memorial Taga-jô-no-hi (p. 222). About 1 ri from Shiwogama is the seaport *Sabusawa*, situated on an island; *Iwanoma*, 2,400 inhabitants, on the Abukuma and the union of the Hama-kaidô (coast road) from Iwaki, with the Naka-kaidô (inland road) or Ôshiu-kaidô; *Ishinomaki*, 10,400 inhabitants, harbour at the mouth of the Kitakami; *Furukawamachi*, 3,400 inhabitants; *Sennuma*, 4,400 inhabitants, and *Wakuya*, 2,100 inhabitants, in the interior.

4. *Rikuchiu (Nambu)*. This province borders to the south on Rikuzen, to the north on Mutsu, to the west on Ugo, to the east on the Pacific, which forms many little bays and some good harbours. The Kitakami divides the district lengthways; the Ôshiu-kaidô runs along it. Horses, iron and copper are the most noteworthy products of the province, which is called Nambu, after its former prince, who ruled in Morioka over a territory of 220,000 koku. *Morioka*, the chief town, lies chiefly on the left bank of the Kitakami, in lat. 39° 44' N. and long. 1° 23' E. of Tôkio. It has 30,000 inhabitants, and does not give an impression of prosperity. The manufacture of cotton fabrics from raw material imported from the south is its chief branch of industry. In the castle court now standing is an old plantation of a rare kind of pine (*Pinus koraiensis*), which reminds us of *Pinus Strobus*, but bears large edible nuts in its cones. The copper from Osarisawa, one of the most important mines of Japan, 24 ri north-west of Morioka, is brought to the town upon beasts of burden, and then carried in flat boats down the Kitakami to Ishinomaki, whence it is shipped to Tôkio. Four ri north of Morioka rises the mighty Ganjû-san. *Ichinoseki* (Tamura, 30,000 koku), situated on the border of Sendai and Nambu in the beautiful valley of the Kitakami, has about 3,000 inhabitants. Further north, on the Ôshiu-kaidô, follow

Midzusawa, long the seat of government, with 5,200 inhabitants, and *Hanamaki*, 4,500 inhabitants. To the east of Midzusawa lies *Iwayadô*, 4,400 inhabitants, and north-west of Morioka, *Hanawa*, 4,100 inhabitants. On the Pacific are: *Kesenuma*, 2,500 inhabitants, and *Kamaishi*, 3,500 inhabitants, a good harbour. Ten miles west are the largest magnetic iron beds and iron works in the country. *Yamada* and port of Nambu, 3,100 inhabitants; *Miyako*, 3,400 inhabitants. *Tôno*, in the interior, on the way from Kamaishi to Morioka.

5. *Mutsu*, the northernmost province of Hondo, north of Ugo and Rikuchiu, stretches along the Tsugaru Straits from the Sea of Japan to the Pacific. Here terminates the cultivation of rice, and apes, black bears, pheasants, etc., are no longer met with. The greater part of it once formed the lordship of Tsugaru. Its prince reigned in *Hirosaki*, the second largest town of Ôshiu, over a territory of 100,000 koku. Marbled lacquer wares, with a green ground, called Tsugaru-nuri, are manufactured here. In the west rises the Tsugaru-fuji (Iwaki-san). *Aomori* (Awomori), situated lat. $40^{\circ}54'N.$, on a deep, sheltered bay, has 11,000 inhabitants, and is the usual port of embarkation to Hakodate, distant 60 nautical miles, while the land route to Tôkio is reckoned as 200 ri (445 English miles). *Kuroishi* (Tsugaru, 10,000 koku), south-east of Hirosaki, where a branch of the house of Tsugaru resided, has 6,500 inhabitants. *Shichinohe*, on the great high road from Morioka to Aomori, has 4,000 inhabitants, and *Hachinohe* (Nambu, 20,000 koku), to the east and not far from the Pacific, 3,000 inhabitants. *Tanampu*, a port on the Bay of Awomori, with 3,300 inhabitants.

C. Dewa.

Dewa, which since 1868 has been divided into the provinces of Uzen and Ugo, extends along the Sea of Japan from Echigo to Mutsu, borders in the north on the latter, in the south on Echigo and Iwashiro, in the east on Ôshiu (Iwaki, Sendai, and Nambu). Its population numbers 1,200,000. The country has several fertile plains, produces silk and lacquer in addition to rice and other agricultural products, carries on mining in the north-east, for coal, copper and silver, as well as a considerable fishery on its coasts, though it has neither harbours nor good roads. It is at present divided into two administrative districts, Akita-ken and Yamagata-ken.

The more northerly province of *Ugo*, almost double the size of Uzen, has some fertile tracts in the Omono-gawa and Yoshino-gawa—cheap rice and haughty Samurai—and enjoys upon the whole a much greater degree of prosperity than the neighbouring Ôshiu. The chief town *Akita* (formerly called Kubota) lies on the right bank of the Toshima-gawa (Omono-gawa), not far from its mouth, and has 38,000 inhabitants. Here reigned formerly

Satake, a Kokushiu of a very old family—tracing its descent from Hachiman-Tarô—of over 205,000 koku, and a collateral line over 20,000 koku. The town lies in lat. $39^{\circ} 42' N.$, 60 ri from Aomori, 78 from Niigata, 155 from Tôkio. It carries on some silk manufacture, and gives the impression of greater wealth than Morioka. *Kakunotate*, a prosperous, cheerful, and charmingly situated little town with 4,000 inhabitants, lies on the way from Akita to Morioka. To the south of Akita in the district of the Omono-gawa; *Ômagari* with 2,700 inhabitants, *Yokote* with 8,200 inhabitants, and *Yuzawa* with 5,800 inhabitants. Along the south coast we find, *Honjô* (Rokugô 20,000 koku) with 6,400 inhabitants, on both sides of a considerable stream—to the south is desied the giant Chôkai-san—*Shiwokoshi*, 2,300 inhabitants, and *Sakata*, 18,600 inhabitants. This town lies on the right bank of the broad but shallow Mogami, and was until 1876 the chief town of a ken of the same name. Thence a road runs in a north-easterly direction, past *Matsumire*, 3,000 inhabitants, and *Yajima*, 2,300 inhabitants, to the upper course of the Omono-gawa. To the north-east of Honjô lies *Kameda* with 4,100 inhabitants, formerly the residence of the petty Daimiô Iwaki (20,000 koku).

To the north of Akita, along the coast, we find the following noteworthy places: *Tsuchisaki*, 8,600 inhabitants; *Funagawa*, a seaport town at the entrance into the Hachirô-gata; *Noshiro*, 9,200 inhabitants, on the shore to the left of the Noshiro-gawa. The town carries on fishing, commerce, wood and lacquer industries. Up the river lies *Tsurugata*, and 15 ri from Noshiro, *Ôdate*, 7,700 inhabitants; then *Matsuyama* (Sakai, 25,000 koku) with 3,000 inhabitants. In the upper district of the Noshiro-gawa (here called the Yonetsuru-gawa), towards the north-east, lie *Ani*, *Osarisawa*, and *Kosaka*, noted for their mines.

2. *Uzen*. Southern Dewa touches the coast for a distance of 17 ri only from the mouth of the Mogami to Nedzumigaseki, the most westerly portion of the province here projecting like a peninsula between Ugo and Echigo. The eastern boundary runs for four times this distance along the crest of the backbone range of the Adzuma-yama, as far as Komagatake, where four provinces (Uzen, Ugo, Rikuzen, and Rikuchiu) meet. The Mogami waters the province, and forms four fertile plains, named after the chief towns and lordships to which they belonged, namely, Yonezawa, Yamagata, Mogami, and Shônai. Rice and silk-worm rearing, procuring of lacquer, and the manufacture of silk and lacquer, are the most favoured occupations.

Yonezawa (Uyesugi, 150,000 koku), to the north of the Lake of Inawashiro and almost equidistant from the two seas, built on the left bank of the Matsu-kawa (Mogami), is a town of 25,000 inhabitants. The houses are almost all covered with straw, and do not give an impression of great prosperity in their owners. Yonezawa is 36 ri distant from Niigata, 32 from Sendai, 16 from

Wakamatsu, from 12 to 15 from Yamagata and Fukushima, and 84 from Tôkio. The fertile plain in which it extends itself occupies from 10 to 12 square ri, and produces besides rice and other field-crops, a good deal of tobacco. The amount of silk produced is also considerable. Of the inhabitants of this former territory of the Daimiô Uyesugi, every fifth man is a Samurai. The old castle and the dwellings of the Samurai round it cover a considerable area.

Yamagata, north-north-east of Yonezawa, to the east of Mogami, situated lat. $38^{\circ} 19'$ N. and long. $0^{\circ} 31'$ E. of Tôkio, is the seat of government. Midzuno, a Daimiô of 51,000 koku, formerly resided here. The town has 23,000 inhabitants, and is said to be flourishing.

Shinjô or *Mogami*, a town in northern Uzen with 8,400 inhabitants, was the residence of the Daimiô Tozawa (68,000 koku).

Shônai, or as it is now usually called, *Tsurugaoka*, before 1876 the seat of a governor, was formerly the residence of Sakai, a Fudai-Daimiô of 140,000 koku, who was military governor of Yedo at the time of the war of restoration. The town has 25,000 inhabitants, but is said to have a poverty-stricken aspect. It lies south-east of Sakata in the plain of Shônai. Of the other towns of the province must be mentioned: *Tendô* (Ôta, 2,000 koku), 5,100 inhabitants, north of Yamagata, and *Kaminoyama* (Matsudaira 30,000 koku) with 3,600 inhabitants, to the south; *Nagadoro* (Yonetsu, 11,000 koku), on the left bank of the Mogami, with 2,600 inhabitants; as also *Yajima* with 6,600 inhabitants, and *Sagaye*, 5,500 inhabitants; *Tateoka*, north of Tendô, with 4,100 inhabitants, and *Oyama*, a cheerful little town to the south of Tsurugaokô, with 3,500 inhabitants.

IV. HOKUROKUDÔ, OR NORTHERN LAND ROAD.

Of the seven provinces of this district five form a long, narrow strip along the Sea of Japan, the sixth (Noto) projects as a peninsula northwards, the seventh (Sado) is an island at a distance of only 20 miles from the coast. The whole district, with the exception of the southernmost province Wakasa, but including the district of Dewa, was called in olden times Koshi (Koshi-no-kuni, the land of Koshi), or in the Chinese form, Echi. Later it was divided into Further, Middle, and Lower Echi (Echizen, Etchui and Echigo), and Kaga and Noto were again separated from the former, and Dewa from Echigo. Now the two southernmost provinces form, with Ômi, the Shiga-ken; Kaga, Noto and Etchui, the Ichikawa-ken; Echigo and Sado, the Niigata-ken. The whole district of the Hokurokudô contains 3,410,000 inhabitants. Among the towns, Kanazawa has over 100,000 inhabitants. Toyama and Fukui each over 40,000, Niigata over 30,000, Takata and Nagaoka over 20,000 inhabitants.

The district has fertile plains, cultivates the tea-shrub in various tracts, in other the lacquer-tree, and in the mountain valleys the white mulberry for silk-worm rearing. In some parts the mines are of importance, as are the fisheries along the coast. Several places are distinguished by flourishing branches of industry. During winter the communication by sea almost entirely ceases. The high road leads for the most part along the coast, and sends off connecting roads, such as the Hokkaku-kaidô and others, eastward to the Nakasendô.

1. *Wakasa* or *Jakushiu*, the smallest of the seven provinces extending along the much indented bay of the same name, to the north of Kiôto, carries on, besides agriculture, tea-growing and fisheries, and in its towns silk and lacquer industries. The most important places lie on the sea, viz. the chief town *Obama* or *Ohama*, with 19,300 inhabitants, where Sakai, the lord of the province with above 112,600 koku, formerly resided; *Takahama* with 3,300 inhabitants, and still further to the west *Minatsu*.

2. *Echizen*, lying between the sea, *Wakasa*, *Ômi*, *Mino*, and *Kaga*, with tea-culture, silk-worm rearing, and paper industry, The chief town *Fukui* (formerly *Sakata*), beautifully situated five miles from the sea on both banks of the *Asuwa-gawa*, is cleanly and cheerful. Its golden days were when Matsudaira still resided there as *Kokushiu* and lord of 320,000 koku. The port of *Sakai* has 9,050 inhabitants. In the south of *Echizen* lies *Tsuruga* (*Sakai*, 10,000 koku) with 15,000 inhabitants. The deep but not very spacious harbour, which is moreover well sheltered by a girth of hills, is the best on the Sea of Japan. This fact and the prospect that it will in after years be connected by rail with Kiôto and Ôzaka, as well as the various valuable products of the province, especially tea, promise a future of great importance to *Tsuruga*, quite apart from its favourable position with regard to *Corea* and the *Russian* coast. To the south-east of *Fukui* lie *Maruoka* (*Arima*, 50,000 koku) and *Ôno* (*Doi*, 40,000 koku), the former with 4,800, the latter with 10,000 inhabitants. From this place the road runs along the *Aburasaka-tôge* to *Hachiman* and *Gifu* in *Mino*. *Sabaye* (*Manabe*, 50,000 koku), south of *Fukui*, has 3,800 inhabitants, and *Takebu* to the west of the latter place (once an important town under the name of *Fuchiu*), 9,400 inhabitants. *Katsuyama* (*Ogasawara*, 22,270 koku) with 6,400 inhabitants, to the north of *Ôno*.

3. *Kaga* or *Kashiu*. This province borders southward on *Echizen*, northward on *Noto*, in the east on *Hida* and *Etchiu*, in the west on the sea, and once formed with *Noto* and a portion of *Etchiu* the rich dominion of *Mayeda*, the first *Daimiô* of Japan with 1,027,000 koku. He resided at *Kanazawa*, a town with 110,000 inhabitants and broad clean streets, four or five miles from the sea. Several of its industries are in a highly flourishing condition. Among them the most important are the bronze industry, with splendid incised and inlaid work, the much prized painting on

Kutani-yaki (Kaga porcelain) in gold and oxide of iron, and recently a silk-winding factory worked by steam. Takamatsu on the sea, with 3,000 inhabitants, may be considered the port of Kanazawa. The high road to Fukui runs close along the coast past *Mikawa* with 5,100 inhabitants, and *Terai*, which has porcelain factories, to the town of *Komatsu*, formerly a Daimiô residence, which numbers 10,000 inhabitants and carries on considerable mat manufacture, then to *Daishôji*, where dwelt a branch of the house of Mayeda, called Matsudaira, with 100,000 koku. The town lies in the tea-district and has a population of 9,400. Two or three miles to the east is the watering-place *Yamashiro-mura*, with several porcelain works in its vicinity.

4. *Noto*, the peninsula. Its chief places are *Nanao* with 8,200 inhabitants, and *Wajima* on the north coast, with 7,100 inhabitants.

5. *Etchin*. Noto, Kaga, Hida, Shinano, Echigo and the sea, which, as the Toyama Bay runs far into the land, form the boundaries of this province. *Toyama* (Matsudaira, 100,000 koku) with 45,000 inhabitants, is the chief town, and a place of considerable size and handsome appearance, situated on the high road and the Jindzû-gawa, which is crossed by a very long bridge of boats (*funa-bashi*). Inland on the way from Toyama to Kanazawa lies the town of *Takaoka*, with 24,000 inhabitants who carry on a considerable bronze industry. On the sea are: *Himi*, population, 8,000, *Shinminato* (new port) to the east of Himi and north of Takaoka, sprung from Fushiki and other places, the chief harbour of Etchû, with 19,000 inhabitants, besides *Midzhashi* with 5,500 inhabitants, *Namerigawa* with 5,500 inhabitants, and *Uwotsu*, population 10,000.

6. *Echigo*, the northernmost and largest of the provinces of the Hokurikudô, extends for a length of more than 70 ri along the sea, and consists chiefly of two parts, a mountainous district along the borders of Uzen in the north, Iwashiro, Kôdzuke and Shinano in the east, and Etchû in the south; and a more or less fertile plain on the Shinano-gawa, Agano-gawa and various other coast rivers, which is for the most part separated from the sea by a sand dune. The highest mountain is Iidoyo-san which rises in the north-east of Niigata.

The most remarkable products are: in the mineral kingdom—petroleum, coal, and copper; in the vegetable—rice, tea, lacquer, and vegetable tallow. *Niigata* (*i.e.* Newmere), the chief town, lies in lat. 37° 58' N. and long. 0° 44' W. of Tôkiô. It was built in the age of the Tokugawas, on the left bank of the broad but shallow Shinano-gawa, a little above its mouth. Sand dunes which are partially planted with black pines, and rise to a height of 18 or 20 metres, separate the town from the sea, and afford beautiful prospects of the island of Sado, as well as of the lofty border-mountains on the east and north-east. Niigata has a population of 38,000. It reminds us, by its canals and the tree-bordered walks running along them, as well as its cleanliness, on

which the inhabitants pride themselves, of a Dutch town. It is built in other respects like all the towns in the country, of rows of lightly constructed wooden buildings. As at Hirosaki and many other towns in the north, the houses running along the streets are provided with projecting eaves, so as to afford protection to passengers along the paved footpaths in winter against the snow, which often falls in large quantities, and in summer against the hot rays of the mid-day sun. Among the manufactures we should mention the preparation of lacquer-wares, which is carried on in about two hundred houses.

Niigata as a treaty-port is of small importance, since, owing to the bar at the mouth of the river and the violent north winds, navigation is entirely stopped during the six months of winter. Accordingly the imports and exports of the province, except those of rice and fish for the Chinese market, are carried on by way of Yokohama. In consequence, only a few foreign merchants reside here, with a very limited business.

The two principal towns of the province after Niigata are *Nagaoka* and *Takata*. *Nagaoka* lies on the right bank of the *Shinano-gawa*, south of Niigata. As a faithful adherent of the Tokugawas it played a prominent part in the civil war of 1868, and was almost entirely burned down. It has now a population of 24,000. It was formerly the residence of Makino, a Daimiô of 71,000 koku. The road from Niigata to the Mikuni-tôge and Tôkiô runs through it, and the river brings a good deal of traffic. *Takata* (*Sakakibara*, 15,000 koku) has 27,500 inhabitants. It lies on the *Seki-gawa*, in the southern part of the province, where the *Hokkoku-kaidô* branches off to *Shinano*, and is 35 miles distant from Niigata. At the mouth of the *Seki-gawa* lie: on the left bank the little town of *Imamachi*, population 2,800; on the right bank, *Nawoye*. Following the road along the coast to the south, we come to the excellently situated town of *Itoigawa* (*Matsudaira*, 10,000 koku), which has a population of 5,800. Northward, the *Hama-kaidô*, the main road, runs past the handsome town of *Kashiwazaki*, with 14,000 inhabitants; *Idzumosaki*, with 8,900 inhabitants; *Teradomari*, a straggling town, is the port of embarkation to *Sado*, with 5,500 inhabitants; and then Niigata. North of this place the high-road leads past *Iwafune*, population 3,200, and *Murakami* (*Naitô*, 50,000 koku) on the *Miomote-gawa*. The town lies in the northernmost part of the tea-district and in one of the chief lacquer-districts, and is prosperous; its population numbers 18,000. The tea-shrub is also cultivated in the former Daimio-seats, *Kurokawa* and *Muramatsu*. *Kurokawa* (*Yanagisawa*, 10,000 koku) has 4,000 inhabitants, and lies inland to the south of *Murakami*. *Muramatsu* (*Hori*, 30,000 koku) with 7,200 inhabitants, lies south-east of Niigata. Other noteworthy towns are: *Shibata* (*Mizoguchi*, 100,000 koku) with 11,300 inhabitants, north-east of Niigata; not far from it *Mikkaichi* (*Yanagisawa*, 10,000 koku);

Sanjô with 2,800 inhabitants, and *Yoita* (Ii, 20,000 koku) with 5,400 inhabitants, both between Niigata and Nagaoka. Somewhat further east are: *Shinoya* (Hori, 10,000 koku), population 4,000; *Gosen*, population 4,000; *Kamo*, 4,000; *Tokamachi*, on the Shinanogawa, in the southern hill country, with 5,600 inhabitants.

7. The island of Sado. The importance of this island to Japan consists in its mines, which have been worked to the north-east of Aikawa for centuries, and were the chief source of the precious metals. At present they produce but little. Sado was a domain of the Tokugawa Shôguns. The governor resided in the chief town *Aikawa*, which numbers 13,000 inhabitants. *Kawarada*, on the south-western bay, has 2,000 inhabitants; *Ogi*, on the south coast, 2,600; and *Ebisumachi* (Ebisu-minato, crab port), on the north-eastern bay, 3,400.

V. PROVINCES OF SANYÔDO, OR ON THE MOUNTAIN SUNNY-SIDE ROAD.

Their population amounts to 3,650,000 souls. They all, with the exception of Mimasaka, border on the Seto-uchi, along which runs the highway from Ôzaka through Hiôgo, Himeji, Okayama, Hiroshima to Shimonoseki, then past the straits to Kokura, in Kiushiu. This was, before there were steamers, almost the only means of communication between this island and Hondo, along which the Daimiôs' progresses to Kiôto and Yedo were made, and along which the Dutch embassies travelled every year to the court of the Shôgun.

1. *Harima* (*Banshiu*), now forming a part of Kôbe-ken, borders on Settsu, Tamba, Tajima, Inaba, Mimasaka, Bizen and the sea. It is a large, fertile, populous and prosperous province, with many flourishing places and numerous historical associations. Rice and cotton are its chief products. The former residences of Daimiôs are:—

Himeji (Sakai, 150,000 koku), *Akashi* (Matsudaira, 100,000 koku), *Tatsuno* (Wakisaka, 51,000 koku), *Akô* (Môri, 20,000 koku), *Mikadzuki* (Môri, 15,000 koku), *Yamazaki* (Honda, 10,000 koku), *Hayashida* (Tatebe, 10,000 koku), *Ono* (Hitotsuyanagi, 10,000 koku), *Anshi* (Ogasawara, 10,000 koku), *Mikusa* (Niwa 10,000 koku).

Himeji, the chief town of Harima, situated on the right bank of the lower Ichi-kawa in a fertile plain, has a population of 25,000 inhabitants and an active commerce, for it is the meeting point of three main roads: the Sanyôdô, which runs from this place to Shimonoseki, a road to Mimasaka, Hôki and Idzumo, and a third up the valley of the Ichi-kawa to Ikuno, Toyoôka and the Sea of Japan. *Akashi*, the second largest town of the province, has 14,500 inhabitants. It lies opposite the island of Awaji on a strait named after it, and has a high reputation for the magnificent prospect

which may be enjoyed from it in clear weather over the Bay of Ōzaka, and its environs.¹ *Tatsuno* with 5,200 inhabitants, on the right bank of the *Shisō-gawa* inland from the main road; *Akō* with 7,150 inhabitants, lying on the right bank of the *Kusaki-gawa* where it empties itself into the sea, produces excellent salt. Here formerly resided Asano Takumi-no-kami, whose ill-fated end gave rise to the deed of the "Forty-seven loyal followers." *Mikadzuki* is a small town on the left bank of the upper *Kusaki*, which is here called the *Kumami-gawa*. *Yamazaki* is situated, like *Tatsuno*, on the right bank of the *Shisō-kawa*, but higher up. On the left bank somewhat above *Tatsuno*, lies *Hayachida*, and further up are situated inland towards the boundary of *Settsu*, *Anshi*, *Ōno* and *Mikusa*; *Fukumoto* lies north of *Himeji* on the road to *Ikuno*. Of the remaining towns may be mentioned: *Shikamatsu*, the port of *Himeji* with 7,300 inhabitants; the port of *Murotsu*, 2,700 inhabitants; *Takasago*, between *Himeji* and *Akashi*, population 6,350; *Ōshiwō* with 4,100 inhabitants.

2. *Mimasaka* (*Sakushiu*), a part of *Okayama-ken*, is bounded by *Harima*, *Inaba*, *Hōki*, *Bitchiu* and *Bizen*, and watered by two navigable rivers, the *Nakasu* and *Nishi*, which, down stream at least, provide easy communication with the *Seto-uchi*. The inhabitants are engaged in mining for copper, iron and silver, in agriculture and weaving. Formerly they were under two *Daimiōs*, who resided at *Tsuyama* (*Matsudaira*, 100,000 *koku*) and *Katsuyama* (*Miura*, 23,000 *koku*). *Tsuyama*, the chief town of the province, lies on the *Nakasu-gawa*, and has 15,500 inhabitants who are principally engaged in cotton weaving and dyeing, as well as in the manufacture of hardware. *Katsuyama*, charmingly situated on the left bank of the *Nishi-gawa* (west river), $7\frac{1}{2}$ ri west of *Tsuyama*, has a considerable traffic and 7,000 inhabitants. Of the remaining towns we may note: *Mashima*, population 2,750; *Kuze*, 1,750 inhabitants; *Kurashiki*, population 1,280; *Doi*, population 2,000; *Yuhara*, with sulphur springs.

3. *Bizen*, a part of *Okayama-ken*, bounded by *Harima*, *Bitchiu* and the sea. This province is watered by the *Yoshii* (*Nakasu*) and *Okayama* (*Nishi*), along which extend fertile plains in which rice and cotton are grown upon a considerable scale. It formerly belonged to *Ikeda* (*Matsudaira*), a *Kokushiu* of 315,200 *koku*, who resided in *Okayama*, where his castle was situated in a splendid park. *Okayama*, now the chief town of the *ken* of the same name, on the right bank of the river called after it, is a considerable town of 33,000 inhabitants. *Ushimado*, on the Inland Sea, has 3,200 inhabitants, and the port of *Shimotsui*, 2,300. *Mitsuishi* has a population of about 3,000.

4. *Bitchiu*, enclosed by *Bizen*, *Mimasaka*, *Hōki*, *Bingo* and the

¹ In the time of *Taikō-sama* the *Daimiōship* belonged to *Takayama* (the *Justo Ukondo* of the *Jesuits*).

sea, watered by the Kawabe-gawa, is more mountainous and less fertile than the last-mentioned province. It now belongs to Okayama-ken, while formerly it was divided into five small Daimiôships, their rulers being : Itakura (50,000 koku), Kinoshita (25,000 koku), Itakura (20,000 koku), Seki (28,000 koku), Itô (10,300 koku). Their respective seats were at Matsuyama, Ashimori, Niwase, Niimi, and Ogata. *Matsuyama* on the left bank of the Kawabe-gawa, has 6,000 inhabitants. *Ashimori*, to the south-east of it, has 2,850 inhabitants ; *Niwase*, in the south and near the borders of Bizen, 1,600 inhabitants ; *Niimi* (Shimmi), on the Kawabe, north of Matsuyama, 2,800 inhabitants ; *Ogata* (Okata), on the high road, 2,000 inhabitants ; *Kasaoka*, on the sea, the present chief town, 6,400 inhabitants. *Yatake* and *Itakura* on the high road.

5. *Bingo*, west of the last mentioned province, and also bounded by Hôki, Idzumo, Iwami, Aki and the sea, belonged to the Daimiô Abe (110,000 koku), who resided in Fukuyama, and now forms with Aki the Hiroshima-ken. *Fukuyama*, situated at the mouth of the Tôjô-gawa, has 17,700 inhabitants. Of more importance at present is the port of *Onomichi*, a lively town of 9,800 inhabitants, traversed by the Sanyôdô. To the north-west of it, *Mihara*, also situated on the high road, has 8,600 inhabitants. On the way thither, near Onomichi, is the temple of *Senkoshi*, the name of which is so familiar in Japan because of the magnificent prospect from it. The port of *Tomo-no-tsu* at the southern extremity of Bingo has a population of 6,000. *Fuchiichi* has 4,050 inhabitants.

6. *Aki* (Geishiu), an important province between Bingo, Iwami, Suwô, and the Seto-uchi, watered by the Ota-gawa. Its chief town, also the seat of a Kenchô, is *Hiroshima*, in the fertile delta of the Ôta, with 80,000 inhabitants in 19,000 houses. It is the most considerable town in Chiugoku and is next to Ôzaka, with which, by reason of its numerous canals and bridges, it has some similarity, the largest commercial town of the whole Inland Sea. Formerly one of the most powerful princes of the country resided here, a Kokushiu with 426,000 koku, named Asano, usually called Geishiu after his province. His castle stood in a large park quite at the lower end of the town. Opposite Hiroshima is the beautifully wooded Miya-jima (temple island) or Aki-no Miya-jima, celebrated for one of the oldest Shintô-shrines in the country, built in 587 A.D. by the Emperor Suinin, in honour of the goddess Benten. The island, also called Itsuku-shima, abounds in deer, but has no dogs. Its inhabitants consist of priests, innkeepers, fishermen, and image carvers. They number 3,600, and live in a town which bears the name of the island. In the interior of Aki the town of *Yoshida* has a population of 3,200. On the military road lie besides Hiroshima, *Kuba*, *Hatsukaichi*, *Saijô Kaida-ichi*.

7. *Suwô* (*Bôshin*) is bounded by Aki, Iwami, Nagato, and the

Seto-uchi. The province has large plantations of cotton and the paper-mulberry. The manufactures of paper, mats and sea-salt are considerable. Together with the province of Nagato it formerly constituted the dominion of the powerful Mōri family, whose residence was at Yamaguchi, formerly at Hagi. At present the two provinces form the Yamaguchi-ken. In Tokuyama and Iwakuni were the castles of younger branches of the highly respected Mōri family. The town of *Yamaguchi* (i.e. mountain opening) lies between the mountains of east and west Hōben, 12 ri from Hagi. It has hot springs and a population of 11,600. Though it has only 10,000 inhabitants, *Iwakuni* is a more important town, and is the chief seat of the paper, mat and cotton industries. It lies on the right bank of the river of the same name, nor far from the sea, and possesses a very famous old bridge, the Kintaikiō or Kintai-bashi. Towards the SSW. the Iwakuni-yama is visible. The town of *Tokuyama* with 7,000 inhabitants is also not far from the coast. The seaport of *Mitajiri*, south of the mouth of the Kawasaki river, has 4,500 inhabitants. *Miyaichi* and *Takamori* lie on the high road. The large island of *Yashiro* belongs to Suwō.

8. *Nagato* (*Chōshiu*) forms the south-west extremity of Chiu-goku, and lies opposite the island of Kiushiu, and so close to it that in clear weather the dwellers on the opposite coasts can see each other. The province is mountainous and less fertile than Suwō. *Hagi*, the chief town of Nagato and former residence of Mōri (369,000 koku), who was commonly called *Chōshiu*, is situated on the Sea of Japan. It has 11,500 houses and 45,400 inhabitants. Its Samurai played a prominent part in the conflicts with the Tokugawa and at the time of the restoration of the Mikado's supremacy. The Daimiō of Chōshiu belonged to the eighteen Kokushiu. Younger branches of the family resided at Chōfu (50,000 koku) and at Kiyosuye (10,000 koku). The town of Chōfu (Fuchiu), now *Toyoura*, has 5,860 inhabitants. It lies at the entrance to the Shimonoseki Straits, the port of *Shimonoseki* extends further westward along the coast in a single long street. The town is properly called *Akamagaseki*, and has a population of 18,500. In the background rises steeply, though not very high, a range of hills which is in part thickly wooded. Opposite in Kiushiu is situated the little place *Mojisaki*. *Kiyosuye*, to the north of Toyoura, has only 1,800 inhabitants.

VI. PROVINCES OF SANINDŌ, OR THE MOUNTAIN-SHADE ROAD.

All these provinces, except Tamba, border on the Sea of Japan, but possess only insignificant harbours. They are inferior to the Sanyōdō in fertility and in area. The traffic on the highway connecting them with each other is limited, while intercourse with the rest of Japan is carried on through Kiōto, Himeji and

other large towns of the Sanyôdô. The population of this district is 1,660,000.

1. *Iwami* (*Sekishiu*) is bounded by Nagato, Suwô, Aki, Bingo, Idzumo, and the Sea of Japan, along which it extends. The Gô-gawa (*Yeno-gawa*), coming from Aki, is its principal river. The soil of this province is mountainous and unproductive, and the rice-lands therefore very limited. In its southern portion it produces much iron, and in the Gô-gawa iron-sand. Iwami forms at present a part of the Shimane-ken: formerly the larger portion of it was the possession of the two small princes, Matsudaira (61,000 koku) at Hamada, and Kamei (43,000 koku) at Tsuwano. The town of *Hamada* on the sea, south-west of the Gô-gawa, has a population of 4,000. *Tsuwano* with 8,000 inhabitants, is a more important town, and is in the south near the borders of Nagato. *Masuda*, population 1,800; *Ômori*, population 1,500.

2. *Idzumo* (*Unshiu*) is bounded by Iwami, Bingo, Hôki, and the Sea of Japan. The districts of Shimane, Aika and Tatenui form a tongue of land along this sea, while to the south of it the Naka-umi with the Radish Island (*Daikon-jima*) makes its way into the land, and is connected in the west with the freshwater lagoon *Shinji-no-midzu*. The province lies opposite the island of Oki, and is one of the earliest settlements of the immigrant Japanese, famous for several of its old Shintô-shrines, in which the Kami of the whole country are supposed to assemble in the eleventh month. The noteworthy occupations of the inhabitants are the cultivation of Ginseng, mining for iron and copper, and fishery. *Matsuye*, the chief town of Idzuma and the Shimane-ken, splendidly situated at the outflow of the lagoon Naka-umi, clean and with long wide streets, has 8,700 houses and 37,800 inhabitants. In the old castle of this Jôka resided formerly a Kamon named Matsudaira (186,000 koku). Two smaller Daimiôs of 30,000 and 10,000 koku dwelt in Hirose and Môri. *Hirose*, the former residence of Matsudaira, is a small town of 3,900 inhabitants, south of Matsuye, and *Môri*, still less important, is south-east of it. To the west of Matsuye lies *Kidsuki*, on the sea, a prosperous little town of 1,840 inhabitants, famous for its Ôyashiro, dedicated to the god Ôkuninushi; *Sada*, north-west of the chief town, possesses the second most celebrated Shintô-temple in the province. *Mionoseki*, at the extremity of the tongue of land of Shimane, has 1,500 inhabitants; *Yasugi*, on the Naka-umi, 3,200 inhabitants; and *Hirata*, on the way from Matsuye to Kidsuki, 3,130 inhabitants.

3. *Hôki* (*Hakushiu*), east of Idzumo, between that province, Mimasaka, Inaba and the sea, a portion of the Shimane-ken, formerly belonged to the Daimiô of Inaba, and formed his chief source of revenue. The volcano of Daisen, above 1,600 feet high, is well known; it was in former days a sacred and much-visited mountain, and its lower part is magnificently wooded. *Yonago*, with a population of 10,240, is the chief town of the province on the east side

of the Naka-umi, to the south-east of the Yonago peninsula. Other small towns are *Sakai*, population 3,300; *Tonoje*, 2,900; *Watari*, 2,900; *Yodoje*, 2,300; *Akasaki*, 2,100; *Kurayoshi*, 4,800; *Mikura*, *Tomari*.

4. *Inaba* (*Inshiu*) bordering on Hôki, Mimasaka, Harima, Tajima and the sea, has a good many sand dunes along the coast, and in the interior chiefly a steep and rocky country, so that only 5 per cent. of its area is under cultivation. Tea, silk and vegetable-wax are the chief products of the province. Its chief town, *Tottori*, has 20,800 inhabitants; it was formerly a much more considerable place, but its prosperity has diminished since the restoration. It lies on the Karo-gawa and was the residence of a Kokushiu of 325,000 koku, named Ikeda (Matsudaira) Sagami-no-kami. *Shikano*, population 2,250; *Karo*, at the mouth of the Karo-gawa, 2,600; *Ushiodzu*, 2,240; *Awoya* and *Kachimii*, with warm baths, on the coast; *Iwai*, a famous watering-place, 2 ri from the Kamo-tôge, on the way to Tajima.

5. *Tajima* (*Tanshiu*) is enclosed by Inaba, Harima, Tamba, Tango, and the sea. The province is watered by the Toyooka-gawa, abounds in splendid mountain scenery, valuable minerals, and is fertile in the valley of its principal stream. There is a good deal of silk-worm rearing. *Toyooka*, population 5,000, now the chief town of the Toyooka-ken, lies on the left bank of the river of that name. Formerly a petty Daimiô of 15,000 koku, viz. Kiôgoku, dwelt here. At *Idzushi*, a town of 6,800 inhabitants, south-east of Toyooka, resided Sengoku (30,000 koku). The third town of importance is *Ikuno* in the south of the province and on the road from Toyooka to Himeji. *Ikuno* is at present the most important mining town of Japan, with a population of 5,000, and is rapidly increasing. Silver and gold are obtained under the direction of French engineers. "The arrangements are excellent," says Wojeikof; "all the surrounding heights were robbed of their forests to furnish wood for Ikuno, and there now grows hardly anything but shrubs, among which camellias and azaleas predominate." The highest mountains around are from seven to eight hundred metres high. To furnish easy communication with the coast, the French have made a macadamised road from Ikuno to Himeji, the best in Japan. North-east of Toyooka are the hot springs of Kinosaki.

6. *Tango* (*Tanshiu*) forms the promontory of Hondo between Tajima, Tamba, Wakasa and the sea. It is watered principally by the Miyadzu-gawa, which comes from Tamba. The province is a well cultivated hill-country, with magnificently wooded heights, and a variegated mixture of deciduous and evergreen trees. It enjoys in its bays, at least during the long summer, an idyllic peace, which unites with the beautiful forms and colours of the surroundings to enchain the lover of nature. Politically this province now belongs to the Kiôto-ken, but before the restoration it

was subject to three Daimiôs, who dwelt at Miyadzu, Tanabe and Mineyama. *Miyadzu*, the most important town, with a population of 9,400, was the residence of Matsudaira (70,000 koku). In its vicinity, and near the place called *Amano-hashî-tate* (Heaven's Bridge), there runs into the sea a narrow tongue of land, the position of which is greatly admired by the Japanese. They count it one of the three wonders of the coast of Japan.¹ At *Tanabe* dwelt Makino Sanuki-no-kami (35,000 koku). The town is now called *Maidzuru*, it lies in a bay, and has a population of 9,100. *Mineyama*, the third Jôka, belonged to Kiôgoku (15,000 koku), lies north-west of Miyadzu, in the Sanindô, and has 2,800 inhabitants. *Takeno*, at the mouth of the Takeno-gawa.

7. *Tamba*, adjoins Tajima, Tango, Wakasa, Ômi, Yamashiro, Settsu and Harima. It lies pretty high, and is almost entirely girdled by mountains, and deer are still very numerous in its extensive forests. It now belongs to the Kiôto-fu, but formerly it fell into no less than seven Daimiôships, whose chief towns were Sasayama, Kameyama, Fukuchiyama, Sonobe, Kaibara, Ayabe, and Yamaka. *Sasayama*, where Awoyama (66,000 koku) resided, has 6,000 inhabitants, and lies in the south of the province, on the left bank of the Miyadzu-gawa, which, like the Katsura-gawa and Ichi-kawa, rises in Tamba. *Kameyama*, or Kameoka, lies to the west of Kiôto on the Katsura-gawa. It is the most considerable town in Tamba, with 7,080 inhabitants, and was formerly the residence of Matsudaira (50,000 koku). At Fukuchiyama, a town of 4,900 inhabitants, on the Miyadzu-gawa, lived Kuchiki (32,000 koku), and at Sonobe, Koide (26,700 koku), *Sonobe*, with 2,700 inhabitants, lies north-west of Kameyama. The Daimiô Ota Yamashiro-no-kami (20,000 koku) dwelt at *Kaibara* (Kashiwabara, 3,000 inhabitants), in the south-west of the province on the Ichi-kawa, and Kuki (19,500 koku) had his stronghold at *Ayabe*, with 1,550 inhabitants, to the east of Fukuchiyama. *Yamaka* was the seat of Tani (10,080 koku).

8. The island of *Ôki* (Inshiu), together with three smaller islands on the south-west, lies to the north of Idzumo, but is often difficult of access in winter. Its population numbers 29,000, and it is supposed to have kept itself pure and unmixed since the time of the first immigration. The islands are mountainous and well-wooded, and export timber and firewood. The chief town *Yabi* (Yamashima) has 2,246 inhabitants. *Nishi-no-shima* (west island) on the south-west, contains the volcano Takuhi. East of it lies *Naka-no-shima*, south *Chifuri-shima*. *Ôki* belongs to the Shimane-ken. The distance from Matsuye is given in Japanese maps as 37 ri.

¹ The two others are Matsu-shima, in Sendai Bay, and Itsuku-shima, in the Bay of Hiroshima on the coast of Aki.

VII. THE NANKAIDÔ, OR SOUTHERN SEA-ROAD.

The Nankaidô includes Kishiu on the peninsula of Yamato, as well as the islands of Awaji and Shikoku, in all six provinces with a population of 3,350,000, of whom 2,545,000 are in Shikoku alone.¹ It is only in respect of the mild climate and of the products depending upon it that there prevails a certain unity between the three portions of the Nankaidô which are separated by arms of the sea.

1. *Kii* or *Kishiu* forms the southernmost part of the peninsula of Yamato, and encircles the mountainous southern half of the province of the same name in a wide curve. The traveller who sails through the Linschoten Straits sees only the wooded mountains of this province or the precipitous cliffs of the coast, upon which at night the lights on their southern promontories, Shiwomisaki and Ôshima (in $34^{\circ} 27'$ N. and $135^{\circ} 52'$ E.) are particularly conspicuous. If, however, he enters the beautiful country as a tourist, and follows up the little river courses from the sea to their sources in the mountains, he finds that Kishiu is a country which combines within itself most of the natural beauties of Japanese scenery, and many of its most remarkable products. Carefully cultivated rice-fields, cotton and many other plants in the valleys, tallow-trees (*Rhus succedanea*) here and there along the roads, orange plantations in sheltered nooks, tea-shrubs and paper-mulberries on the declivities, and huge old camphor-trees near a few temples. The most splendid bits of forest in the mountains, where the noblest of the Japanese conifers, the cryptomerias, and the retinosporas, including magnificent specimens, are found in great quantity, delight his eye in addition to beautiful mountain forms and clear streams. The productions of the province, which are principally exported, are splendid Mikan (mandarin) oranges, chiefly from the district of Arida, to the south-east of Wakayama, and wood, tea, vegetable-tallow, coal and lacquer-wares.

Kishiu now forms the Wakayama-ken. It formerly belonged to a relative of the Shôgun, the prince of Kishiu, who resided in Wakayama, and had 555,000 koku of revenue. Branches of his house lived in Tanabe and Shingû.² *Wakayama*, the chief town of

¹ Shikoku and Kiushiu are both thickly populated. There are in them 362 inhabitants to the English square mile, on the mainland (Hondo) only 300. The table at p. 5 is taken as the basis of this calculation, whereas in the topographical section I have made use of the figures of the Nippon Chichi Teiyô, which indicate an increase of population.

² The relationship of the five powerful princely houses—whom Japanese history briefly designates as Owari, Kishiu, Mito, Echizen and Aizu, and who were always regarded as the nearest and most natural supporters of the Yedo-Shôguns—to Iyeyasu is as follows: Owari, Kishiu and Mito, the Sanke, were descended from Yoshinawo, Yoriyoshi and Yorifusa, the three younger

Kishiu, lies on the left bank of the Yoshino-gawa, about four miles before it flows into the Linschoten Straits. It is a considerable town of 60,000 inhabitants, with clean, straight, though not very broad streets, and gives an impression of prosperity. The castle was pulled down, its solid masonry sold for a trifling sum for breaking up, and then acts of Vandalism were extended even to the trees of the beautiful park. It was at Wakayama, during the period of transition between the civil war of 1868 and the mediatisation of the Daimiôs, that Sergeant Köppen, of Bückeburg, displayed his activity and talent as instructor of a small army of 5,000 men under the friendly prince. He impressed the Japanese by his presence and rigid discipline; was a teacher not only in the drilling-ground, but also at the practice of the band, which he organized; and despite the rigour of his discipline, succeeded in making himself so popular, that the author in travelling through the principality in the summer of 1875, found the young men still using German oaths, and met with several persons who spoke with pride of their apprenticeship under Köppen.

Fourteen ri to the east of Wakayama, in the basin of the Yoshino-gawa, lies the famous monastic town of *Kôya*, with 3,500 inhabitants, on a saddle of the wooded Koya-san, at a height of 500 metres above the sea. The way to it led me from the bottom of the valley of the Yoshino north-eastward past small plantations of lacquer-trees and fan-palms, wild, sweet-scented lilies and azaleas, up the hills to a place called Kamiya-mura, which consists of a single street of very neat tea-houses. The way then runs upward through a forest, containing great numbers of stately retinosporas, some of whose trunks are three metres in circumference, cryptomerias and firs (*Abies firma*), till on approaching the town, we are surprised by a grove of magnificent umbrella-firs (*Sciadopitys verticillata* Thunbg.), with grey trunks and cones like those of a pine-tree, the *Kôya-maki* of the Japanese. The little town consists entirely of temples, monasteries, hostelryes, and shops for the sale of objects dedicated to the worship of Buddha, such as rosaries, images of saints, etc., like a Roman Catholic place of pilgrimage in Europe. There are nearly 370 temples and monasteries alone, many of which are very spacious. Everything about the place is exceedingly neat, and speaks of a pleasant and comfortable life, despite the restriction to a vegetable diet. Kongô-buji, the great temple, is charmingly decorated. The wood-carvings, paintings, gilding and lacquering of the pillars and doors are reckoned among the most beautiful productions of Japanese artistic industry. *Kôya* was long a free town, it frequently served also as a place of exile, and lives upon its ancient fame and splendour.

sons of Iyeyasu, the house of Echizen from the eldest, whose name was Hideyasu, the house of Aidzu from Hoshina Masayuki, a son of the Shôgun Hidetada, and thus a grandson of Iyeyasu.

From Wakayama the coast road passes through *Ynasa*, with 7,000 inhabitants; *Tanabe*, with 7,500 inhabitants; *Katsura*, *Shingû* with 9,000 inhabitants; *Kinomoto*, with 2,600 inhabitants; *Kada* and *Owashi*. The celebrated waterfall Nachi-no-taki is only four miles distant from the little sea-port of Katsura, and there are in the vicinity of the bay, hot springs, famed for their medicinal properties. Shingû, the most important place and harbour, exports wood, and coal from a mine lying only a few ri up the river.

2. The *Island of Awaji*,¹ the largest in the Seto-uchi, is 14 ri long, with a width of 7 ri in the south, and 4 ri in the north; mountainous, composed of diorite, gneiss, granite and old schists, wooded on the mountains and well tilled in the valleys. Within an area of 218 square miles, there are 240 townships, with 35,000 houses and 170,000 inhabitants. It was formerly a territory of the Daimiô of Awa, but at present it forms two districts (Kori) of the Hiôgo-ken. The chief town *Sumoto*, with 7,300 inhabitants, lies on the east coast. It is a busy manufacturing place and has had for some years a large match factory. About twelve miles distant, near Igano, is a celebrated stoneware factory, whose productions remind us of those of Satsuma, and created no small surprise at the Vienna Exhibition of 1873. The second important town in Awaji is *Yura*. It is situated to the south-east of Sumoto, and has 5,940 inhabitants. On the south-west coast, opposite the Naruto (whirlpool), lies the little town of Fukura, with 4,990 inhabitants. *Shitsukihama*, to the north of Sumoto on the east coast, has a population of 3,950.

The *Island of Shikoku*, the "Four-lands," lies apart from the main lines of communication, and has as yet received little attention from foreign men of letters.² Its chief traffic is still, as it has always been, with Ôzaka, which now possesses a line of steamboats in connection with the more important towns. There is on the other hand little direct communication between Shikoku and Kiushiu. The roads in the interior of the island are for the most part bad, especially those over the passes. Except in the mountains, the climate is very mild, and on the south of the island is influenced by the Kuroshiwo. *Laurus camphora* L. is still found here as a forest-tree. In the fertile plains and valleys the ordinary crops are cultivated, and on the slopes the vegetable-wax tree and the paper-mulberry.

3. *Awa*, or *Ashû*, as it is usually called, to distinguish it from the province of the same name on the Bay of Yedo, the most easterly province of Shikoku, between Sanuki, Iyo, Tosa and the sea, watered and fertilized along its length by the Yoshino-gawa

¹ The Japanese have derived the name from "a haji=I am ashamed of myself!" This is said to have been the exclamation of Isanami with regard to the smallness of the island; but the real meaning of the word is "way to Awa."

² The author was the first naturalist who, accompanied by Dr. von Roretz, travelled through the Island of Shikoku, in the early summer of 1875.

and the Naka-gawa, has several fertile plains in the lower course of these rivers. The tallow-tree is found but seldom, but a great deal of tobacco is grown, also Ai (indigo), which is considered the best in the whole country. The coast as well as that of Awaji supplies the town of Ôzaka with fish. *Tokushima*, the chief town of the province, formerly the residence of the Kokushiu Hachisuka (258,000 koku), lies on the left bank of the Yoshino, not far from its mouth. The town has 54,000 inhabitants and is considered prosperous. Higher up on the river lies *Ikeda* with 3,400 inhabitants. All the other towns, such as *Okazaki*, *Komatsushima*, *Tomioka* and *Hiwasa* along the coast are equally unimportant places. Awa till lately belonged to the Kochi-ken, but is now separated from it.

4. The province of *Sanuki* lies in the north-west of Ashiu on the Seto-uchi, on which also all its larger towns are situated. Its products are the same as those of Awa. Formerly three Daimiôs partitioned the province between them, which now together with Iyo forms the Ehime- (Yehime) ken, having Matsuyama as its chief town. *Takamatsu*, a seaport on the Inland Sea, formerly the seat of the Daimiô Matsudaira Sanuki-no-kami (120,000 koku), has 33,000 inhabitants. *Marugame* with 14,000 inhabitants, is charmingly situated on the Inland Sea, and was formerly the residence of the Daimiô Kiogoku (51,000 koku), whose castle on a hill is seen from a great distance. Behind the town rises the volcanic cone Shirane-mine or Sanuki-Fuji, from the midst of a fertile plain. *Tadotsu*, barely 5 miles south-west of Marugame, is a beautifully situated seaport and the former residence of a collateral branch of the Kiogoku family, with 10,000 koku. The little town has 4,000 inhabitants, and like Marugame serves as the starting-point for pilgrimages to the celebrated temple of Kômpira near *Kotohira*. This place is about 2 geographical miles to the south-east and south of the seaports just mentioned, and lies in the same fertile plain. The roads to it are good, and are frequented by pilgrims and beggars.¹ Kotohira may number 5,600 inhabitants. It is full of roomy hostleries. In one of these over five hundred pilgrims dine every day. Their goal is the celebrated temple of the god Kômpira, or as he is now commonly styled in the official Shintô-worship, Kotohira. After passing by the long rows of booths in which rosaries, idols, chop-sticks of Sakaki-wood (*Cleyera japonica*, the sacred Shintô-plant) and hundreds of other articles are sold, a broad and high granite staircase leads up to the chief temple, where rice is offered to the life-sized bronze horse of the idol, and pious pilgrims rush forward to pick up and eat the scattered grains. The road is bordered by splendid trees, and winding up the mountain affords many views of the temples and surrounding

¹ Here the author saw wheelbarrows for the only time during his stay in Japan, and those of a very rough, primitive form.

country. Specially efficacious mountain herbs are offered for sale here and there, and the priests sell a variety of O-fuda (charms) against various sicknesses and infirmities. In another place we find the plan for a new temple, and an invitation to subscribe. A long row of boards on posts hold up the names and contributions of the pious donors to public knowledge and imitation. These boards are larger and placed higher in proportion as the munificence was more considerable.

Of the places on the coast may be mentioned: *Hikeda*, 4,300 inhabitants; *Tsuda*, 5,000 inhabitants; *Shido*, 5,600 inhabitants; *Sakaide*, 6,500 inhabitants; *Utatsu*, 4,600 inhabitants.

5. *Iyo*. This province extends for a considerable distance from Sanuki, along the Seto-uchi as far as the Bungo-nada; its eastern boundary runs along the mountains toward Tosa. Its chief lines of population and intercourse also lie along the Inland Sea or in the plains in the interior. The paper-mulberry and the vegetable-wax tree are cultivated on a considerable scale; mines of copper and antimony are found in the mountains. *Matsuyama*, the chief town of Iyo and Yehime-ken, has a population of 34,000. A road of 27 ri, or 54 miles long, leads hence past Kuma to Kochi in Tosa. Matsuyama was the residence of Matsudaira Oki-no-kami, with 150,000 koku. The province has in addition eight old Jôkas; viz. *Saijô* (Matsudaira Sakiô 30,000 koku) with 2,000 inhabitants, *Imaharu* (Matsudaira Suruga-no-kami, 30,000 koku) with 12,000 inhabitants, *Uwajima* (Date, 100,000 koku) with 12,200 inhabitants, *Yoshida* (Date, 30,000 koku) with 5,000 inhabitants, *Ôdzu* (Kattowo, 60,000 koku) with 4,000 inhabitants, *Niija* (Katô, 10,000 koku) with 3,000 inhabitants, *Komatsu* (Hitotsuyanagi, 10,000 koku) with 3,100 inhabitants, and *Tago*. Not far from the boundary of Sanuki is *Kawanoye* with 6,000 inhabitants, and *Mitsu*, not far from Matsuyama, with 4,900 inhabitants. *Yawata-hama*, with 4,000 inhabitants, should be noted as a ferry-place over the Bungo-nada (18 ri to Saganoseki). *Uchinoko* is a little town 4 ri from Ôdzu (Osu), with extensive wax-bleaching works.

6. *Tosa* or *Toshin*, the largest and most influential province of Shikoku, enclosing a wide bay of the Pacific to the south of Iyo, is specially distinguished for its camphor and paper. Probably nowhere in all Japan has the cultivation of the paper-mulberry on the slopes of the mountain-valleys attained such a development as in south-western Shikoku. The inner bark of the shrub not only provides for the considerable paper industry of Tosa, which is carried on at *Kami-yama* (paper mountain) in Hata-gori, the southern portion of the province, at *Ino* on the left bank of the Niyodo-gawa, 2½ ri from Kôchi, in the prison of this town and in numerous other places, but large quantities are also exported to other provinces. *Kôchi*, the chief town of Toshiu, situated near the south coast, has 40,000 inhabitants, and is beyond doubt the most important and influential town in the whole island. As the former

residence of the wealthy Yamanouchi Tosa-no-kami (242,000 koku), it contains many Samurai, who have since the Perry expedition always taken an active part in the fortunes of the country; and, like many of the tradespeople of the town, are considered prosperous. The town extends 1 ri in breadth from east to west, has good broad streets, and much traffic. Steam-boats facilitate intercourse with Tokushima and Ôzaka, to which place the passage is made in one day. The inhabitants in Kôchi as well as throughout Tosa and Iyo, appeared to the writer to be self-conscious, like the inhabitants of Satsuma, but decidedly more energetic. The questions which he put to them were, as a rule, answered with surprising clearness and precision. Two other things particularly struck him in the chief town of Tosa; viz. dog fights, for which the animals are specially trained; as well as stands for saddled horses for hire, placed according to the old Japanese fashion before the town gates. The owners of these horses offer them to passers by, as the coolies do their Jinrikishas.

Compared with Kochi the remaining towns of Tosa appear small and insignificant. Among them are *Nakamura*, *Sukawa*, and *Kubokawa*, where branches of the Yamonouchi family dwelt, also *Takaoka* with 5,800 inhabitants, *Aki* with 4,500, *Susaki* with 4,000, and *Akaoka* with a like number.

VIII. KIUSHIU, OR THE NINE PROVINCES OF THE SAIKAIDÔ, *i.e.* THE WESTERN SEA ROAD.

Kiushiu, the most southerly of the four large islands of the kingdom of Nippon, plays a prominent part in its history. It was hence that Jimmû Tennô set forth with his vassals on his career of adventure and conquest, hence that the great expeditions of the Empress Jiugu Kôgo and of Taikô-sama against Corea were undertaken and carried to a successful issue. It was upon Kiushiu that Mendez Pinto and the Portuguese missionaries landed; here, therefore, that acquaintance was first made with Europeans, Christianity, fire-arms, and other matters hitherto unknown to Chinese civilisation. When afterwards, in the first decade of the 17th century, the Catholic missionaries were driven out and Christianity extirpated, Dutch merchants managed to gain the favour and confidence of the powerful Tokugawa, and to maintain, under humiliating conditions, a commercial monopoly for more than two centuries at Nagasaki in Kiushiu. The large profits which they derived from this connection allowed also the principal physicians of their colony at Deshima to study more thoroughly the history, religion, customs, Flora and Fauna of Japan than the Portuguese and Spanish missionaries had ever attempted to do, although great freedom of movement and the favour of powerful Christian Daimiôs had been at the disposal of the latter.

Hence Kiushiu and Nagasaki, its most important port, occupied for more than three hundred years the advantageous position of a medium between Japan and foreign nations, and yet no perceptible profit from this intercourse can at the present time be recognised here above other parts of the Japanese kingdom. It is in ceramic productions alone that Hizen and Satsuma have derived lasting advantage from their close relations with China and Corea, and have been for a long period considerably in advance of the rest of the country, but favourable circumstances with respect to the raw material have indeed largely contributed to this result.

In speaking of this intercourse we must of course distinguish between the eighty years of freer communication during the Christian period and the restrictions and strict supervision under which it was conceded to the Dutch at Deshima. The former undoubtedly brought to a considerable portion of the inhabitants, together with Christianity, superior cultivation and manners, as well as a certain amount of material prosperity—advantages which were utterly lost again through the terrors and oppression of the reaction.

The island of Kiushiu was in old times called Tsukushi. Subsequently this name, which is synonymous with Chikushiu, was confined to the north-western part, while the remainder was divided into Toyo-kuni, Hi-no-kuni, and Kumaso-no-kuni. A further partition of Chikushiu into Chikuzen and Chikugo, of Toyo-kuni (Hôshiu or Bushiu) into Buzen and Bungo, of Hi-no-kuni (Hishiu) into Hizen and Higo, and of Kumaso-no-kuni into Satsuma, Ôsumi and Hiuga finally took place. In consequence of this division, the name of Kiushiu (Nine-land) came into use, though the island is often called also Saikoku (West-land), and sometimes in books Chinsei.

The provinces of the Saikaidô contain 5,050,000 inhabitants, and now form the governments (ken) of Nagasaki, Fukuoka, Oida, Kumamoto, and Kagoshima.

1. *Chikuzen*. This province borders in the east on Bushiu, in the south on Chikugo and Hizen, in the west and north on the Genkai-nada, as the Sound of Corea is here called. It consists of hill country and small fertile plains, in which the usual field products, especially rice, wheat and rape, grow luxuriantly. This district formerly belonged to the powerful family of Kuroda, the head of which, Kuroda Matsudaira Mino-no-Kami, a Daimiô of 520,000 koku, resided at Fukuoka. It now forms, together with Chikugo and the greater part (6 kori) of Buzen, the Fukuoka-ken. A branch of the house of Kuroda, the Daimiô Kuroda Toku-no-suke (50,000 koku), resided in the town of Akidzuki, eastwards of Fukuoka. *Fukuoka*, the capital, lies on a bay of the Genkai-nada. It is divided by a river from the equally large town of *Hakata*. The two contain together 50,000 inhabitants. Fukuoka, when it was a Jôka, possessed besides the castle the dwellings of many

thousand Samurai, while Hakata played to a certain extent the part of a suburb, and was the abode of the tradesmen and artisans. A cotton manufacture, bearing the name of Hakata-ori, is produced here. The neighbourhood of both cities is full of ancient temples and historical monuments. Among the most remarkable are large shapeless stone houses with flat roofs, of very remote date; the only stone buildings known to have existed in Japan before the reopening of the country. A magnificent old avenue of *Matsu* (pine) leads from Hakata to the little town of *Hakozaki* (3,170 inhabitants), and thence to Kokura on the Strait of Shimonoseki. It is a portion of the old country road leading from Nagasaki to the chief cities of the country. On it lie besides *Amagi* (Awomagi) with 4,430 inhabitants, *Ashiya* with 4,450 inhabitants. The small port of *Kurosaki* has but 2,830 inhabitants. Westward of Fukuoka lies *Meihama*, population 3,800, eastward *Futsukaichi*, 3,000, and *Akidzuki*, 5,200 inhabitants. Coal is obtained in the south-east of Chikuzen.

2. *Chikugo*, on the north-east side of the Shimabara-nada, lying between this, Hizen, Chikuzen, Bungo and Higo. The Chikugogawa, which partly forms the boundary towards Bungo and Hizen in the north, the Yabe-gawa and certain other rivers water lower Chikushiu. At their junction with the Shimabara-nada is a fertile plain, to the south of which, where a wooded hilly district intervenes between it and Higo, lies the colliery of Miike. *Kurume* on the left bank of the Chiku is the capital of the province, which has a population of 21,000, and was formerly the residence of the Daimiô Arima (210,000 koku). Another feudal lord of a very ancient family, of the name of Tashibana, resided at *Yanagawa*, once a district of 119,600 koku. The town has 8,500 inhabitants, and lies in the plain on the Shimabara-nada. Places of less importance in the province are *Yenokidzu*, population 2,600; *Wakatsu*, 1,730; *Yoshi*, 2,700; *Fukushima*, 3,250; *Setaka*, 3,900, and *Miike*.

3. *Buzen*. This province lies to the south of the Strait of Shimonoseki, between Chikuzen and Suwo-nada, northward of Bungo, from which an extensive range of mountains, with the Hikosan and other important heights, separate it. Most of its rivers fall after a short course into the Suwo-nada, towards which stretches a fertile plain.

Iyeyasu, in accordance with the rule "divide et impera," divided this province between two Fudai Daimiôs, who were devoted to his interests, viz. Ogasawara (150,000 koku), who resided at Kokura, and Okudaira (100,000 koku), who took up his abode at Nakatsu. In this manner the powerful Kokushiu of the neighbourhood, the Môri, Kuroda, Nabeshima, and Arima were partially separated and controlled. *Kokura*, with 8,500 inhabitants, situate on the Genkai-nada, is the port of embarkation to Shimonoseki, whence it is 15 chô or 1,600 metres, distant. During the period of the Tokugawa rule, it was, according to Kaempfer, a town of far greater importance

It then dwindled in consequence of the partition of the country, but still, as the chief port of embarkation from Kiushiu to Hondo, where the roads from Nagasaki, Kumamoto, and other important towns meet, maintained a thriving traffic, though its harbour was too shallow for larger vessels. Recent times have done still more damage to its interests, for the steam-boats from Nagasaki and Kagoshima, which are frequently passing, carry not only goods but also many travellers, who were formerly obliged to go by land to Kokura. The small town of *Hiki-shima* lies opposite Kokura, at the entrance to the Strait of Shimonoseki. Farther to the north-east, the most northern promontory of Kiushiu terminates in Cape Hisaki, on which is a lighthouse for the entrance of the strait from the eastern side. The town of *Nakatsu*, with 11,600 inhabitants, lies on the Suwo-nada. Places of minor importance are *Ohashi*, population 2,500; *Unoshima*, 2,130; *Usa*, 2,280; *Nagasu*, 4,500.

4. *Bungo* embraces the north-east of Kiushiu, between Bungo-nada (formerly called also Hayasu, "rapid water"), Suwo-nada, Buzen, Chikuzen, Chikugo, Higo and Hiuga. It includes a volcanic peninsula projecting northwards into the Inland Sea, and certain tongues of land belonging to the southern slate mountains, eastward into the Bungo-nada. It is bordered by high mountains towards Hiuga and Higo. The Chikugo-gawa runs through its western part; the Shirataki-gawa is the most important of those rivers whose course is in a north-easterly direction. It is bordered by well-cultivated plains. Bungo is, together with Chikuzen and Higo, the most fertile province in the island. It yields, besides the ordinary agricultural products, tea, tobacco, vegetable wax, large shaddocks and other fruit of the orange tribe. Also alum, copper, iron, antimony and lead. The province, together with 2 kori of Buzen, now forms the Oita-ken. Its capital *Oita*, better known by its former name of *Funai*, lies in a bay of Bungo-nada and Suwo-nada, and has at present only 7,000 inhabitants. During the latter half of the 16th century it was a far more important and flourishing town, and the residence of Omotomo Bungo-no-Kami, the most powerful feudal lord of Kiushiu, whose sway extended as far as the Strait of Shimonoseki, and southwards to the realm of the Prince of Satsuma. It was at Funai that the Portuguese landed in 1543, found a friendly reception, and subsequently their main support. Owotomo, called by the Jesuits King Franciscus, was the first Daimiô of Japan who went over to Christianity. He was represented in the memorable embassy to Rome, Portugal and Spain, in 1585, by his nephew, the son of the King of Hiuga, whom the Jesuits call Jerome.¹

At the beginning of the 17th century ensued the reaction under

¹ "Then Franciscus, a powerful king in Japonia, so justly reckoned among the chief of that country, having lately accepted the faith, was purified by baptism. He had, however, for many years previously so supported the Christian religion

the Tokugawa, and the family of Owotomo were deprived of all their possessions, which were divided among the adherents of Iyeyasu. Bungo alone was split up into seven smaller districts, whose capitals were as follows: Funai (Matsudaira, 21,200 koku), Oka (Nakagawa, 70,000 koku), Usuki (Inaba, 56,000 koku), Kitsuki (Matsudaira, 32,000 koku), Hiji (Kinoshita, 25,000 koku), Sayeki (Môri, 20,000 koku), Môri (Kurushima, 12,900 koku).

Of the above named cities, *Oka*, with 6,000 inhabitants, lies on the left bank of the upper Shirataki-gawa. *Usuki*, with 10,860, the largest town in Bungo, is east of Funai on a bay of the Bungo-nada; *Kitsuki*, with 4,400, and *Hiji*, with 3,000, are also on bays of the Bungo-nada and to the north of Funai. The town of *Sayeki* (5,700 inhabitants) also lies on a bay of the Bungo-nada and south-east of Usuki. Lastly, *Môri*, with 2,700 inhabitants, lies in the upper valley of the Chikugo-gawa. Beside these towns and Funai, the capital, must be mentioned: *Saganoseki*, population 4,400, the port of embarkation to Shikoku; *Tsurusaki*, population 5,540, on the left bank of the Surataki-gawa, and *Hetsuge* on the right; *Takata*, population 2,560, on the road from Kitsuki to Usa in Buzen; *Beppu*, population 3,900, westward of Funai. Of islands, there remain to be named: Hime-shima, in the Suwo-nada, Takashima and Oiri-shima; the former, in the narrowest part of the Bungo-nada, forms a means of connection between Saganoseki and the Mi-saki, the latter in the bay of Sayeki.

5. *Hizen* embraces the north-western portion of Saikoku, and presents the appearance of a peninsula severed from the rest by Shimabara-nada and Genkai-nada. Various other arms of the sea, especially the Chijiwa-nada, Nagasaki-wan, Ômura-no-iri-umi, Imari-wan, and Karatsu-wan, also penetrate far into it, and make it the province of the whole monarchy which is most broken up and severed into different portions. The district is to a great extent mountainous, and stretches out into a larger and fertile plain only on the north side of Shimabara-nada. In the north of this plain rises the Ten-san (Heaven's mountain). Other high peaks of the province are the Kuni-mi-yama (whose name signifies a mountain from the top of which you may overlook the country), in the east of Ômura bay, and notably the volcano, Onzen-ga-take, upon the peninsula of Shimabara.

Hizen, though partly very fertile, does not produce its full requirement of the Go-koku, or five most important field productions (rice, wheat, millet, hemp and beans), while on the other hand it yields a superfluity of tea, tobacco, and vegetable wax. Two of its mineral products, coal and kaolin, are of special importance.

and faith when it first began to increase in his lands, and was still weak and frail, that whatever was in religious matter effected in Japan must be ascribed, after God, to his diligence and good-will."—*Neue wahrhafte ausführliche Beschreibung*, by J. Mayer, pp. 115, 116. Dillingen 1587.



Keio, Japan I.

NAGASAKI.

Phototype by Strumper & Co., Hamburg.

Hodder & Stoughton, Publishers, London.

Coal occurs in two separate basins at Takashima and Karatsu. The kaolin is found in great abundance and of excellent quality at Arita, Imari, and Karatsu. The much esteemed Hizen or Imari porcelain is made from it; such as small cups, almost as thin as egg shells, vases as large as two metres high, and many other like objects.

Hizen, now Nagasaki-ken, to which belong also Iki and Tsushima, was formerly, like Bungo, divided into several smaller domains. Nagasaki, its capital, belonged to the Shôgun, and was under a Bunio or governor; the rest was shared by the following Damiôs: Nabeshima, Matsudaira Hizen no Kami, 325,000 koku, resided at Saga; Nabeshima, Kaga no Kami, 13,200 koku, at Ogi (Koshiro); Nabeshima, Kahi no Kami, 52,625 koku, at Hasuike; Nabeshima, Bizen no Kami, 20,000 koku, at Kashima; Matsudaira, Tonomo no Kami, 70,000 koku, at Shimabara; Matsu-ura, Hizen no Kami, 61,700 koku, at Hirado; Matsu-ura, Bungo no Kami, 10,000 koku, at Hirado; Ogasawara, Sado no Kami, 60,000 koku, at Karatsu; Ômura, Tango no Kami, 27,200 koku, at Ômura; Gotô, Ômi no Kami, 12,600 koku, at Fuguye (Gotô).

The town of *Nagasaki* (see photograph), with its harbour, has so frequently been described and represented, that we may restrict ourselves to what is most noteworthy. It is excellently situated at the end of a long narrow bay, in front of one of the deepest and safest harbours in all Japan, which is about one geographical mile in length, and about one-fourth as wide. Extensive mountain ridges, with peaks of from 300 to 400 metres high, protect it on three sides; on the fourth and western side lies the island of Taka-hoko, from whose steep heights many hundreds of tortured and faithful Christians were once cast into the sea. The Dutch accordingly called it Papenberg. This small island, an imperishable memorial of Christian steadfastness in a time of great tribulation, lies to the left of the entrance. The heights which surround Nagasaki are wooded on the tops, lower down are laid out in carefully cultivated terraces, whose edges are planted with vegetable-wax trees (*Rhus succedanea*). Here and there is seen a village, or an isolated temple, with a gigantic camphor tree, or a small grove; and in the midst of this lovely and varied panorama, the mirror-like harbour, with its large and small vessels and fishing boats picturesquely scattered about it.

The town of Nagasaki has at present 40,000 inhabitants. It fills up a small ravine on each side of a stream, and in some parts ascends towards the neighbouring precipices. Its streets are mostly narrow, and offer nothing particularly striking in comparison with other Japanese towns. "It is quite open," says Kaempfer, "and like most of the towns of Japan, without castle, wall, or trench." The foreign quarter, with its neat houses and spacious streets, stretches along the coast (ura), the Chinese quarter, as also in Yokohama, lying somewhat farther back. Nagasaki, not having

so productive a country behind it as Yokohama, or even as Kobe, its trade is not equal to that carried on by these towns. On the other hand, the importance of its harbour for intercourse with China and Corea, for which it is, by its favourable position, specially adapted, will probably increase more and more. Among the branches of industry carried on at Nagasaki are working in tortoise-shell, also ordinary lacquer work inlaid with mother of pearl, and lacquered earthenware. Besides these articles and Arita porcelain, tobacco, tea, vegetable wax, camphor, and several products of less importance are brought to Nagasaki for exportation.

Nagasaki—as Kaempfer has pointed out—was one of the five richest and most important seaport towns of Japan.¹ Formerly in the possession of the Daimiô of Ômura, its traffic with the Portuguese transformed it from an insignificant fishing place into a wealthy and important port. As early, however, as 1586 it was wrested by Taikô-sama from the Daimiô of Ômura, and declared the property of the central government, all intercourse with foreigners being confined to the harbour. This was the first proof of the disfavour into which Christians and their protectors, the Daimiôs of Bungo, Arima, Ômura, Amakusa and Hirato had fallen, partly through the insolence of certain Portuguese priests—a disfavour which was soon to entail further consequences.

The visitor to Nagasaki will not omit to inspect De-shima, the ancient factory of the Dutch, who, separated and watched like thieves, and subjected to many other humiliating conditions, there enjoyed the great advantages of a monopoly of trade from 1639 to 1859. De-shima, *i.e.* the fore-island, was a small artificial island of only 200 metres long and 60 broad, in the shape of an outspread fan without a handle, situated at the southern point of the town, and only separated from it by a moat. Thus it was ingeniously adapted to its purpose. The small stone bridge, its sole means of access from the mainland, was strictly watched, and every individual who went into or came out of it was under constant control. These restrictions are at last given up. Modern De-shima has lost its ancient character, even in respect of its buildings, a conflagration having some years since made a complete clearance of them, and the new houses being devoid of interest. The gigantic old camphor trees near some of the temples, and the large cemetery upon the height which commands the harbour, are objects which will repay a visit.

Tôjin-yashiki, the Chinese factory, surrounded by a wall, was within the city, and comprised twenty-five slightly-built dwelling houses, and about as many warehouses. Its hundred Chinese inhabitants were indeed under sufficient control, though they enjoyed far greater liberty than the Dutch. They were allowed to go in and out freely, to go about the town, and carry on their small

¹ The other four are Kiôto, Yedo, Ôzaka, and Sakai.

trade unmolested. This consisted in bringing in drugs and dyes, woollen and cotton fabrics, and other objects, and exporting fish, trepang, sea-weeds, copper, and lacquer ware.

To the north of Nagasaki, on the road to Tokitsu, on the bay of Ômura, lies a place called *Urakami*, in which has existed unnoticed since the time of the Portuguese, that Christian community, which about ten years ago had again to undergo some transient suffering on account of its faith, and to be in consequence much spoken of. Nagasaki is at the same distance, viz. 3 ri, from Tokitsu on the bay of Ômura as from the small port of Môgi, lying to the south-east, and serving as the port of embarkation to Amakusa.

Saga, the second town of the province of Hizen, lying in a fertile plain on the north side of the Shimabara-nada, contains 21,000 inhabitants. It was the residence of Nabeshima, prince of Hizen, whose ancestors were invested with this dominion by Taikô-sama at about the same time that Nagasaki became a domain of the central government. Great part of the district formerly belonged to the Christian prince of Bungo. Saga is a town which has somewhat deteriorated. Its Samurai brought themselves into notice by a rising in 1874. *Hasuiki* (population 2,030), *Ogi*, or *Oshiro* (3,650), and *Kashima* (2,970), were the seats of younger members of the family of Nabeshima. They are situated at no great distance from Saga, in the same plain. *Shimabara*, on the eastern side of the peninsula of the same name, the port of embarkation on the route from Nagasaki to Kumamoto, has 18,700 inhabitants. The most sanguinary persecution of the Christians to be met with in the history of Japan took place in 1637, at Arima, in the south of the peninsula. *Ômura*, on the south-eastern side of the bay of the same name, with 9,300 inhabitants, had retained its ancient ruling family; their possessions and influence were, however, much diminished after they were deprived of Nagasaki. Bartholomew, prince of the Omuriens, as it is said in the old history of the Jesuits, took part in the embassy to Rome by means of his brother's son, Michael. *Karatsu* (population 8,000) lies north of Nagasaki on the Genkai-nada. Its exports are coal and porcelain. In the same direction, though nearer, is *Arita*, with its great porcelain manufactories (population 5,400), with its port *Imari* on the west (population 4,000). The harbour of *Isahaya*, with 6,600 inhabitants, lies in the south-east of Ômura, on the Shimabara-nada. *Tokitsu*, on the bay of Ômura, has 5,000 inhabitants, as has also *Yagami*, on the Chijiwa-nada. *Fukabori*, south-west of Nagasaki, on the same side of the bay of Nagasaki, opposite the island of Koyaki, is said to have a population of 17,800, *Toruiye*, 8,670.

Among the islands which, lying west of Kiushiu, belong to the province of Hizen, Hirado and the Gotô are the largest and most remarkable. They lie in a line whose direction is from north-east to south-west, and in which, if produced northward, lie Oki, and

somewhat more to the west Iki and Mishima. They are all mountainous, wooded on the heights and well cultivated in the plains and flat strips of coast. Hirado, lying in the north-west of the entrance to the bay of Ômura, and separated by a deep canal, the Hirado-no-setô, from Kiushiu, is the best known. Its capital of the same name lies in the north-east, a few ri from Hizen. The course of the post-office steamers between Nagasaki and Shimonoseki is along the eastern side of the island and town of *Hirado*. The latter has 10,600 inhabitants, and is worthy of note because its former possessor, the Daimiô of Hirado, gave a friendly reception to, and entered into commercial relations with, the Portuguese, and afterwards, in 1600, with the Dutch. In the year 1609 the Dutch established a factory here, which they were however obliged to give up and transfer to Nagasaki in 1640.

The Gôto, or five islands (Fukaye-shima, Kuga-shima, Naru-shima, Wakamatsu-shima, and Nakatsu-shima) lie entirely under the influence of the Kuro-shiwo, and have therefore a mild climate.

6. *Higo*. This important province lies to the south-east of Hizen, from which it is separated by Shimabara-nada and Hagusaki-nada, it is bounded on the west by the sea, on the north by Chikugo, on the north-east by Bungo, on the east by Hiuga, on the south by Hiuga and Satsuma. It has much fertile territory and produces a superabundance of rice, wheat and barley, it also exports tobacco and vegetable wax. It has already been mentioned in the historical section how Konishi had brief possession of the country, and how it was then transferred to his enemy Kato Kiyomasa, and at last permanently settled on Hosokawa. The latter, a Kokushiu of 540,000 koku, resided in the large and strong fortress at Kumamoto. The illustration at p. 323 shows only a small portion of it, with its massive cyclopean walls and high camphor trees. The castle and its park have been destroyed, and barracks for the garrison erected upon the empty space. Its former deep moats have been also filled up. The garrison under General Tani were nevertheless able, in the spring of 1877, to hold the place against its besiegers under Saigo (p. 372).

The town of *Kumamoto* is situate lat. $32^{\circ} 48'$ N. and long. $9^{\circ} 5\frac{1}{2}'$ W. Tôkio, on both sides of the Shira-gawa, which issues from the volcano Aso. The town lies 4 miles from the mouth of its river and is now the seat of the ken of Kumamoto, which is also called after the district the Shirakawa-ken, and comprises both Higo and Chikugo. It has 45,000 inhabitants in 10,000 houses, and is consequently the most populous town of Kiushiu. It is 11 ri distant from Aso-san, 7 from Shimabara, 48 from Nagaski, 42 from Kokura, 29 from Funai, and 53 from Kagoshima. The small town of Ôshima serves as its harbour.

The other Daimiô seats in the province are *Udo* and *Yatsushiro*, where branches of the family of Hosokawa, with 30,000 and 35,000 koku, resided, and *Hitoyoshi*, which belonged to the

Daimiô Sagara (22,000) The two former lie at no great distance from the coast south of Kumamoto, and have 4,400 inhabitants each; Yatsushiro lies on the right bank of mouth of the Kama-gawa. South-east of it, but much farther landward, is found on the same bank the town and strong castle of Hitoyoshi, with 4,000 inhabitants. Besides these must be mentioned *Takase*, with a population of 2,800 north of Kumamoto on the route to Saga; *Nagasu*, population 3,700, and southwards *Kawajiri*, population 4,700.

To the province of Higo belong the islands Amakusa, Oye or Kami-shima, Nago-shima, and several smaller ones south of the peninsula Shimabara. Amakusa, the most westerly, is of the greatest size and importance. Its slate mountains afford indeed but little land for cultivation, and that of not much value; but coal, antimony, and a peculiar kind of porcelain stone called Amakusa-ishi, are found in several places on the western side of the island. It is easily reached from Nagasaki. *Mogi*, the place of embarkation for it, is 3 ri from Nagasaki and about 5 from *Tomioke*, a small town and port on a fine bay on the northern side of the island, with 3,200 inhabitants. Coal is obtained at a distance of one ri. *Yamaguchi-mura* (population 3,100) lies north-east, and *Ushibuka*, (population 7,600) south of Mogi.

7. *Hiuga* is a province stretching along the eastern coast of Kiushiu, for the most part with a flat shore. Its boundaries landwards are Bungo, Higo, and Ôsumi. Most of its southern part belonged to the Satsuma domain, and forms, with Osumi and Satsuma, that oldest portion of Japan to which its mythical history refers. The province produces large quantities of rice, and is thus able to compensate for the deficiency of that grain in Satsuma. Among the useful, though no longer abundant, forest trees in southern districts are the camphor tree and the *Distylium racemosum* (jap. Isu), the hard wood of which serves for combs, while its ashes are used in the manufacture of pottery. The mountainous district on the boundaries of Bungo has mines of copper and antimony. The main road is always close to the coast, and on it from north to south are the following towns:—

Nobeoka (Naitô, 70,000 koku) with 6,900 inhabitants; *Hosojima*, with 2,300; *Mimidzu*, with 1,900; *Takanabe* (Aidzuki, 27,000 koku), with 3,300; *Sadowara* (Shimadzu, 27,070 koku), with 8,730; *Hirose*, 3,000; *Miyasaki*, with 12,000; *Shibushi*, with 4,700; and *Obi* (Itô, 51,000 koku), with 2,700. Nobeoka, a considerable town on both sides of the Gokase-gawa, over which it has a long bridge, played a part in the Satsuma rebellion (see p. 372). The sea-port town Mimidzu, whence Jimmu Tennô once sailed, has a considerable paper manufacture. The neat little town Takanabe is beautifully situated. Any one arriving here, as the author did in 1875, from the south, is, after ascending a small eminence, surprised at the sight of the towns in the valley below and of the castle on the top

of a smooth green hill to the west, which is framed round by more considerable and wooded hills. Akidzuke, the former possessor of this small domain, was considered a very intelligent person. He had been long in Europe, and was president of the Nobles' Club at Tôkio. The town of Sadowara lies four miles inland from the Hama-kaidô (the coast road). It was always esteemed one of the most important in Hiuga, hence a cipher must be wanting in the Japanese statistics in the number of its inhabitants, which must amount to 8,730 not 873. Hirose lies $3\frac{1}{2}$ ri from Miyasaki, which latter stretches along the left bank of the lower Oyodo-gawa, and was till 1876 the seat of a ken which was then combined with Ōsumi and Satsuma into the Kagoshima-ken. Higher up the river, which is here called Akaë-gawa, lies the little town of Takaoka, which carries on a manufacture of paper. Further westward, towards the Kirishima mountains, is found the small town of Nojiri, with Samurai dwellings, which are almost entirely concealed by small gardens lying towards the road, and planted with bamboo canes, evergreen oaks, and stately camellia trees. The town of *Miyakonojio*, with 7,400 inhabitants, which has also been mentioned in the history of the civil war of 1877, lies south of Kirishima-yama.

8. *Ōsumi* forms the eastern boundary of the bay of Kagoshima and terminates in the Satano-saki, the southern point of Kiushiu, at the 31st parallel. It was part of the Satsuma dominion, and is specially remarkable for its tobacco, which is cultivated on the northern side of the bay in the district of Kokubu, and is considered by natives the best in the whole country. The computation of the population of *Kokubu* at 17,144 seems much exaggerated. *Kajiki*, with 9,400, a pleasant town near the coast, on the way from Kagoshima to Kirishima-yama, is at all events a place of more importance. *Fukuyama* has 4,900 inhabitants, *Sata* 4,400, and *Uchinoura*, on the bay of Ōsumi, 2,900. The large islands in the south, viz. Tanaga-shima, where Mendez Pinto landed, with the port *Akaoki*, and Yakimu-shima with *Miyanoura*, are reckoned as belonging to Ōsumi.

9. *Satsuma* or *Sashiu*. Satsuma, so often mentioned in the historical portion of this work, and the name of which is so specially current in Europe with all collectors of ceramic productions, consists of the south-western portion of Kiushiu, from Higo as far as the Kaimon-saki to the entrance to the Kagoshima-ura, and of several islands, south and west of the latter. On the north-western side of the deep gulf lies the capital, *Kagoshima*, and opposite this and scarcely at an hour's distance the fine island of Sakura-jima, with its lofty volcano. Kagoshima is one of the oldest towns in Japan, and was for a long period the residence of the family Shimadzu, whose sway extended over Satsuma, Ōsumi, portions of Hiuga, and several of the Riukiu islands, on the whole over a district of 770,800 koku. The Samurai quarter of the capital, with

its broad clean streets and well kept front gardens before the houses, is worthy of inspection, as is also as much of the castle park as is still kept up. The fortress itself was destroyed during the bombardment by the English in 1864. The town has 30,000 inhabitants, is the seat of government for the ken of the same name, which comprises all Satsuma, Ōsumi and Hiuga, and possesses a large arsenal. Eastwards is *Tanoura*, excellently situated on the coast, and forming a kind of suburb, where the famous porcelain, or more correctly Fayence, factory especially deserves a visit, as does also the beautiful grove a little farther off, whose principal trees, *Laurus camphora*, and *Quercus cuspidata*, vie with each other in size. The products of Satsuma are, besides its world-famed ceramic wares, tobacco, camphor, vegetable wax, and horses; on the other hand, the supply of agricultural produce is not equal to the demand.

Of other towns on the coast must be named: *Akune*, the port of embarkation to Ushibuka upon Amakusa, a fishing town upon the open shallow roadstead, with 10,918 (?) inhabitants; *Sendai*, on both sides of a river of the same name. The small town on the left is called *Mukoda*; on the right, *Midzukiki*. At about a quarter of an hour's distance, in a splendid grove, is the tomb of Ninigi-no-Mikato (p. 214); *Kago*, with 24,902 (?) inhabitants; *Miyanofio*, with 8,607 (?) ; *Yamagawa*, with 6,289 (?) ; *Kaseda*, with 31,595 (?) ; *Tsuboya* or *Nahashirogaha* (*Naôshirogawa* on the map), the town of the Coreans, with about 1,000 inhabitants, between Ichiku and Kagoshima, about 12 miles from the latter, where seventeen families of the potters brought from Corea by the Daimio Shimadzu Yoshihiro in 1598, still carry on the craft of their ancestors; *Taniyama*, with 21,087 (?), and *Ihusuki*, with 11,588 (?)¹

To Satsuma belong:

(a) The *Koshiki islands*, viz. *Kamo-Koshiki* and *Shimo-Koshiki* on the western side of the province, with beautifully wooded mountains.

(b) *Iwo-shima*, the Sulphur Island, with an active volcano in the south, and a number of other smaller islands.

The islands of *Iki* and *Tsushima* form two independent provinces, which are not reckoned with any of the dô or country

¹ The author could not possibly obtain at the Kenchô at Kagoshima any statistical estimates of even the capital, and the compiler of the *Nippon Chichi Teiyô* seems to have been equally ill-informed concerning the whole former domain of Satsuma. His statements concerning the population of most of the towns, with the exception of Kagoshima, are much too high, and in some cases are three, nay even four times, in excess of the fact. *Akune* is a miserable hole. *Sendai*, as I know from my own inspection, scarcely half as large as stated. There is another reason too against them. The towns, whose populations are here given according to Japanese statistics, do not lie in fertile plains, have no special manufactures, were not the residence of princes, and must, on all these accounts, be far inferior in the numbers of their inhabitants to Kagoshima.

districts. Iki-no-kuni comprises 55 square miles and 33,000 inhabitants. It formerly belonged to the Daimiô Matura, who dwelt at *Katsumoto*, on the northern side of the island. This town contains about 4,900 inhabitants; *Gonoura* on the south-western coast, $33^{\circ} 52' \text{ N.}$ and $10^{\circ} 6\frac{1}{2}' \text{ W.}$ of Tôkio, 2,800. The port of *Ishida* on the south-eastern coast is, according to Japanese maps, equally distant, viz. 15 ri from the towns of Hirado and Kuratsu.

Tsushima was for centuries in the possession of the Sô family, with 100,000 koku. The chief town, *Fuchiu*, now called *Idzunohara*, has 8,800 inhabitants, and is in lat. $34^{\circ} 12\frac{1}{2}' \text{ N.}$ and long. $10^{\circ} 29' \text{ W.}$ of Tôkio. The island has an area of 262 square miles and a population of 30,000 inhabitants. It is at an equal distance, viz. 48 ri, from Iki and from Corea, with which it has commercial relations.

IX. HOKAIDÔ, OR THE NORTH SEA ROAD.

Such is, since the date of the Meiji government, the name given to the island of Yezo and the Kurile isles, which were added as an eighth dô or road district to the empire, and divided into eleven provinces. As a colony the district is under a special management called Kaitakushi, which has hitherto swallowed up immense sums.¹ This is briefly the prevailing opinion among foreigners in Japan. Whether the government, or its American employés and advisers or other unfavourable circumstances, are most to blame for this, is a matter of indifference; I would here only state that the American method of farming is the most ill-adapted to Japanese circumstances that can well be imagined and that consequently Japan was very ill-advised to go to cousin Jonathan for lessons in the colonization of Yezo.

According to what was said in a former section on the orography and climate of the island of Yezo, all hopes of profitable agriculture must be limited to the south-west of the island, and especially to the plains of the Ishikari and its tributaries. From all the reports of American mining engineers, however comprehensive and seemingly favourable, the author could but conclude, that as matters now stand, profitable mining for valuable metals is not to be expected, while for coals it is yet very doubtful. Hence the chief resources of the island are still, as they have always been, the sea with its abundance of fish and algæ, and hunting, for which rational treatment might make the woods and fields profitable. The prodigious quantities of salmon, herrings, shell

¹ Kaitaku, "the opening, the improvement of a desert country," and shi, "to make, to effect." Since February 8th, 1882, the Kaitakushi has been done away with and the colony divided into the prefectures of Hakodate Sapporo, and Nemuro.

shell, and other valued kinds of fish, have gradually added to the aboriginal coast population numbers of Japanese immigrants, some of whom have permanently settled in the towns and villages, while others only come over from northern Ōshiu and Dewa for the summer months, and are employed by traders as day labourers, in fishing and in the collection and preparation of edible algæ.

The entire population of the Hokkaidō amounts to 150,000, of whom 95,000 are in the province of Ōshima, while only 453 are in the Kuriles. The number of Ainos is stated to be 16,163.

1. *Ōshima*, i.e. the large island, a name evidently applied originally by the Japanese to all Yezo, and subsequently limited to its south-western province on the Tsugaru Strait. It contains the oldest settlements of Japanese in Yezo, the town of Matsumaye, which was under a Daimiō (Idzu-no-kami, 30,000 koku), the town of Hakodate, which, as a domain of the Shōgun, was presided over by a governor, and the town of Yesashi.

Hakodate, one of the Treaty Ports, lat. $41^{\circ} 46'$ N. and $140^{\circ} 40'$ E., lying on the Tsugaru Strait and a fine and spacious bay, is one of the safest and most sheltered harbours in the country, being sufficiently deep and having excellent anchorage. The town has about 30,000 inhabitants, among whom are but 600 Ainos and 70 foreigners.¹ In the year 1854, Lieutenant L. Maury, U.S.A., a member of the Perry Expedition, estimated its population at only 6,000. Hence its increase has been rapid. *Matsumaye* (or *Matsmai*) was then the more important of the two capitals of Yezo. It lies in the south-west of the island, and now numbers 16,000 inhabitants. *Yesashi*, the third port of Ōshima, is said to have 9,000. This town is on the western coast.

2. *Shiribeshi* stretches northward along the Sea of Japan as far as the bay of Ishikari. Its capital, *Ōtaru*, with 4,000 inhabitants, carries on a considerable fishing trade even with China. Iwanai, a small place also on the coast, is noted for its coal.

3. *Iburi*, south-east of the last-named province, on and eastwards of the Volcano Bay. Chief place, *Mororan*, on the Bay of Endomo, with 600 inhabitants, has excellent anchorage; first discovered by Broughton. *Yubutsu*, *Osarubetsu* and other villages on the coast are devoted to fishing.

4. *Ishikari*. This province, named after the principal river of the island, has certainly an important future before it. *Sapporo*, the new capital of Yezo, founded by Kaitakushi, lies here, in lat. $43^{\circ} 3' 56''$ N. and long. $144^{\circ} 42' 49''$ E. Gr., 18 metres from the sea on a tributary of the Ishikari. The town has an agricultural

¹ The statement in Behm and Wagner's, *Die Bevölkerung der Erde*, vol. vi. p. 112, is another example of the great unreliableness of the Japanese statistic Nippon Chichi Teiyō, from which Knipping derived it. According to this work, Hakodate had in 1874 a population of 112,494, but at p. 132 the number given for all Ōshima is but 95,404, and at p. 113 the tolerably correct number for Hakodate, 28,025.

school under American management, and is said to be planned in American style. One of the first cares of Kaitakushi was, it is said, the erection of a Yoshiwara. The small town of Ishikari, at the mouth of the river of the same name, has hitherto been, by reason of its extensive salmon fishery, the more important and flourishing.

5. *Teshio*, northward of the last-named province, and lying along the Sea of Japan. Its chief town, called *Rurumoppe*, has but 500 inhabitants, and is noteworthy as the most northerly meteorological station.

6. *Kitami*. This province stretches along the Sea of Ochotsk from the northern point of the island of Yezo to Cape Shiretoko. *Mombetsu*, with 400 inhabitants, is the chief town. *Soya*, on the Strait of La Perouse, is the port of embarkation for Sachalin.

7. *Nemuro*, the easternmost and smallest province in the island, has a town of the same name (on the Walvis Bay of Fries) with 1,400 inhabitants.

8. *Kushiru*, situated like the two following provinces on the south coast; its capital is the seaport town of *Akeshi*, with 1,000 inhabitants.

9. *Tokashi* bears the name of the second largest river in the island. Its chief place is *Hiroo* or *Birô*, a seaport.

10. *Hidaka* forms the south-eastern peninsula of the island with Cape Yerimo-saki. Its capital is called *Saru* and lies not far from the boundary of Iburi. Other places on the coast deserving mention are *Shidzunai*, *Urakawa*, and *Horoidzumi*.

11. *Chishima* (thousand islands) or the Kuriles.

A long diplomatic strife between Japan and Russia concerning the possession of the island of Sachalin or Karafto was, in 1875, terminated by a treaty in which the former renounced its claims to the southern part in favour of Russia, while in compensation the latter ceded to Japan the Kuriles, eighteen uninhabitable islands, beginning with Urup on the De Vries Strait, and reaching as far as the Kurile Strait at Cape Lopatka. The exchange was one advantageous to Russia; for as yet, except the catching of sea-otters and a few seals, the north-eastern Kuriles have offered no attractions. On the other hand, the claims of Japan upon Sachalin were of no ancient date, and had no better foundation than those of Russia. The two largest and most important of the Chishima, viz. Kunashiri and Etorôfu, formerly belonged to Japan, as did also the smaller island of Shikôtan (pronounced Shkotang), where grows a kind of bamboo cane called Shikotan chiku (chiku take, bamboo cane), distinguished by dark brown spots on the cane, forming a beautiful and much esteemed graining. The chief place on the south coast of Kunashiri is called Tomari. In Etorôfu are the fishing stations *Furubetsu*, *Atoya*, *Naipo*, and others.

The Riukiu or *Loochoo* islands,¹ 171 square miles, population 170,000. The former kingdom of Riukiu, now, under the name of the Okinawa-ken, the thirty-sixth department of Japan, comprises thirty-six inhabited islands, stretching from the Colnet Strait towards Formosa, and forming three large groups exclusive of the Linschoten islands. Some especially of the smaller islands, *e.g.* the Seven Sisters, in the north are volcanic and rise steeply out of the sea, others seem to be coralline formations ; the majority, however,



A RIUKIU ISLANDER.

are both geologically and botanically quite unknown. The climate ranges from a subtropical character in the north to a tropical in the south, and is on an average pleasant and healthy. Typhoons and earthquakes are, as also farther northwards, among the troubles of the islanders, who occupy and support themselves with fishing and agriculture. The products of both China and Japan are here

¹ The chief authorities at the author's disposal with regard to the Riukiu islands were Satow's "Notes on Loochoo," in the *Transactions of the Asiatic Society of Japan*, 1873, the accounts of Captains Basil Hall, Beechy, and Perry, and information in the *Japan Weekly Mail*.

cultivated, especially batatas and the sugar cane. Among domestic animals the numerous pigs bear testimony to Chinese influence. The inhabitants are by constitution, language, and manners, one people with the Japanese. Their manners are pleasing. They raise to their foreheads, in token of gratitude, anything given them, a custom often met with in Japan. The officials wore straw sandals, but went bare-headed like the common people. The hair is combed back from all sides to the crown of the head and there fastened in a knot by two pins of gold, silver, or copper, according to the rank and means of the wearer. The shorter has a head which Beechy compares to a flower with six petals, and is turned forwards, the longer is like a marrow-spoon with the handle turned forwards.

During the Shōgunate of Iyeyasu the northern Riukiu group was united with Satsuma. It comprises Ōshima, Tokushima, Kikaiga-shima, and several smaller islands. Ōshima is considered very fertile and yields especially rice and sugar. The chief port *Tomari*, has 5,800 inhabitants.

To the middle group belongs first of all Okinawa-shima or Great Loochoo, a well cultivated island with an undulating surface, and hills 400 metres high, said to be of coralline formation. Its chief town is called *Shiuri*, its port *Nafa*. The statements that the inhabitants amount to 44,984 and 14,610 respectively is undoubtedly much exaggerated. According to all accounts they are small towns whose population does not exceed 10,000. The second port in the island is called *Kume*, and lies farther north.

The 26th parallel forms the southern boundary of the central islands. Between the 25th and 24th degrees of longitude lies the third or Mikayo-shima group, of which we know but very little. The largest islands belonging to it are called Mikayo-shima, Ishigake-shima, and Irima-shima.

The first more intimate relations between Japan and the Riukiu islands took place, as Dr. Satow states, in 1451, at the time when the king of the latter sent a present to the Shōgun Ashikaga Yoshimasa. The trade with Hiogo, and still more that with Satsuma and its capital Kagoshima, developed, and the presents grew into the payment of a regular tribute, which ceased at the beginning of the seventeenth century, because the king of Shiuri then depended more on China. One consequence of this was the expedition from Satsuma, mentioned p. 312. Henceforth the former friendly relations were restored. The king acknowledged the supremacy of Japan, paid a small yearly tribute to Satsuma, did the same to China, and thus stood under the protection of both his powerful neighbours, who gave themselves no farther concern about his affairs or the fate of his country. The inhabitants of Riukiu, an honest, courteous, kindly, and peaceable people, were meantime living frugally and prosperously under these circumstances. Then came in 1874 the arrangement between Japan and

China with respect to Formosa. From that time the former thought it had an exclusive right to the islands, set up steam communication with them, and forbade any further transmission of presents to China. The Riukiu islanders expressed their satisfaction with former relations, and requested the Japanese government to allow their continuance, but in vain; they could not prevent the mediatization in 1876 of their sovereign, the addition of his possessions as a 36th government district, to Nippon, and their entire subjection to Japanese control.

OGASAWARA-SHIMA, MUNINTÔ OR THE BONIN ISLANDS.

The Bonin islands, whose name appears to be a corruption of the Japanese, Munintô or Munin-jima, *i.e.* empty of men, lie between $26^{\circ} 30'$ and $27^{\circ} 55'$ N about 550 miles SSE. of Yokohama. The Japanese now call them after their first discoverer (or possessor) Ogasawara, and have been acquainted with them since the year 1593. Probably the Arzobispo of Spanish navigators to Manilla are the most southerly group. We are indebted for our more intimate knowledge of the islands to Captain Beechy, who landed on one of them, from the *Blossom*, on June 9, 1827, gave it the name of Peel Island, and called the harbour Port Lloyd, determining its situation to be in lat. $27^{\circ} 5' 35''$ N. and long. $142^{\circ} 11' 30''$ E. There are three groups of small islands, which since Beechy's time are distinguished on maps as the Parry, Beechy and Coffin islands, and lie in the direction of the 142nd meridian from north to south. Before Beechy left the islands he affixed to a board which he nailed against a tree at Port Lloyd, a copper sheathing, bearing the following inscription: "H.M.S. *Blossom*. Captain Beechy took possession of these islands in the name and on behalf of His Majesty King George, the 14th June, 1827."

In the year 1830, the first colonists, a mixed company of one Englishman, one Italian, two Americans, one Dane, five men and ten women from the Sandwich Islands, came at the instigation of the English consul to the Bonin islands. Whale fishers sometimes landed and left behind certain individuals of their crews, but the English government gave itself no further concern about its distant colony. When in 1875 Robertson, the consul at Yokohama, visited the islands he found a company of sixty-four persons, consisting of English, French, Americans, Spaniards, South Sea Islanders, Negroes, two Japanese women and cross-breeds. Among the inhabitants there was but one, named Webb, who was still capable of reading and writing. The English government has since 1861, when the Japanese government asserted its right of possession, dropped all claim to these islands. The latter has recently established a regular intercourse with them and seems

about seriously to take in hand their accurate investigation and settlement.

By a treaty concluded with Corea at Söul (Hanshon), its capital, February 26th, 1876, Japan obtained the right of settling in and trading with two ports on the Corean coast. *Fu-san*, the first of these treaty ports, lies opposite Tsu-shima, about lat. $35^{\circ} 5'$ N. and long. 129° E. The settlement seems to flourish; it contains already 2,000 inhabitants, and keeps up an active intercourse with Nagasaki. *Wön-san* (Gensan), the second port, was opened May 1st, 1880. It lies in lat. $39^{\circ} 10' 30''$ N. and $127^{\circ} 25'$ E. on Broughton Bay. The task now devolving on the Japanese in Corea, as formerly on Perry in Japan, seems that of acting as pioneers to the Christian West, and of effecting a connection for which the naval Powers have long striven in vain.

OROGRAPHICAL AND HYDROGRAPHICAL MAP

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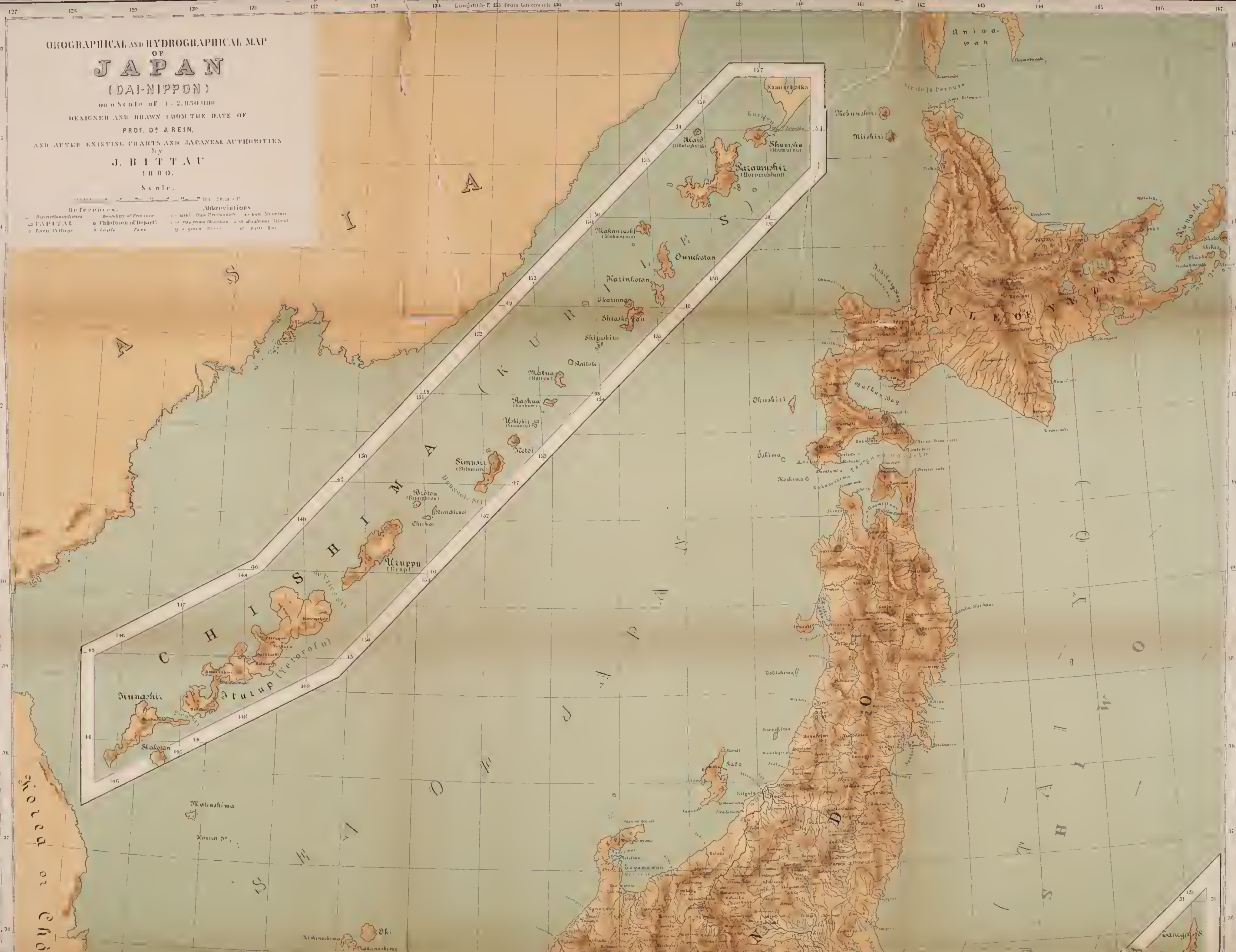
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BY
J. RITTAU

1880.

Scale.

By the following:
CAPITAL
Town Village
Boundary of Province
City Town of Depart.
Castle
Pass
Abbreviations
Seki Cape Promontory
Mountain
Yama Yama Mountain
Yama Yama Mountain
Yama Yama Mountain
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JAPAN

on a Scale of 1:2,500,000
according to the Division of 1876

References:
● Capital
○ Port
■ Castle
▲ Temple
▲ Shrine
▲ Spring
▲ Hot Spring
▲ Bath
▲ Waterfall
▲ Railway
▲ Boundary of Province

Abbreviations:
● Prefecture
● Subprefecture
● District
● Village
● Town
● City
● County
● Province

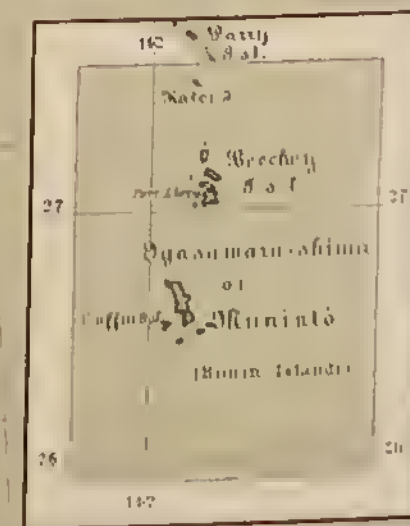
MAP OF JAPAN (DAI NIPPON)

on a Scale of 1:2,500,000

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AND AFTER JAPANESE AND EUROPEAN MAPS

J. REIN
1880.

Scale 1:2,500,000



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